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Critic|all V International Conference on Architectural Design & Criticism
Conference Proceedings

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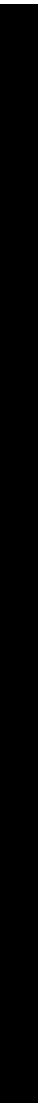
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critic|all

V International Conference
on Architecture Design & Criticism

DIGITAL PROCEEDINGS

Delft 10-11 October

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01 | Presentation

This 5th edition of Critic|all Conference consolidates the initiative that the Architectural Design Department of the Madrid School of Architecture at the Universidad Politécnica de Madrid (ETSAM-UPM) started ten years ago to provide an international forum for architectural criticism.

The Conference enhances its scope as a place for knowledge production from which to convene relevant voices around the proposed topic at each edition. This time, with a join event co-organized with the Department of Architecture of the Faculty of Architecture and the Built Environment at the Delft University of Technology (BK-TU Delft).

We would like to thank all participants for their work and trust, as well as the members of the Scientific Committee for their effort and commitment.

We want to reinforce the idea contained in the conference's name. Critic|all is a *call* on *criticism*, and also a *call* for *all*. An appointment that, beyond the scope of each edition, we hope will be able to reinforce a more general debate on the role of architecture in the present context.

Silvia Colmenares
Director of Critic|all

02 | Call for Papers

e(time)ologies
or the changing meaning of architectural words

The study of the origin and history of words has played a central role in the recurrent search for a deep, allegedly forgotten, meaning of architecture. The strikingly persistent and often problematic influence of Martin Heidegger's *Bauen Wohnen Denken* proves the fascination of architects with the ancestral power of words. The same fascination explains the equally recurrent urge to explore new meanings and invent new terms in architecture, in order to alleviate the weight of old cultural prejudices and connotations. Hence, etymological lines extend in two opposite time directions: one pointing to roots and sources, the other to future visions and transformations. Architectural thought oscillates between the illusory stability of conventional, present meanings, the mystery of remote, often obscure, connotations, and the poetic, creative drive of language invention. Choosing between communication (order) and noise (entropy), the opposite terms used by Umberto Eco, becomes a typically architectural problem, one which relates both to words and forms, terms and materials.

The heavy architecture-is-a-language fever of the 1960s is long overcome. Robin Evans' "all things with conceptual dimension are like language, as all grey things are like elephants" might suffice to prevent its return. However, the multiplication and transformation of architectural words has probably accelerated since then, pushed by the development of competitive research production. In fact, every research problem is, at its core, a problem of language, of word use and word definition. Research on the contemporary urban and architectural condition can be no exception.

Meaningful arguments about the changing meaning of architectural words need to address the role of language in the description of current matters and realities as well as its potential to unchain innovative perspectives and actions. New situations call for new terms as much as new terms provoke new situations. Today's interface of architecture with other disciplines is exemplary in this sense. The growing need to establish meaningful communication between experts from different fields fosters both codification and distortion of language, the homologation of terms and its expansion through translation and borrowing. In the first case, the descriptive precision is favoured to produce an objective (codified) system, whereas misunderstandings, metaphors and inaccuracies can lead to the generation of new knowledge and actions in the second. Such complexities are especially evident in the terminology emerging from practice-based or design-based research. In fact, the translation between visual and verbal signs, which is at the core of architectural practice, tends to obscure the distinction between descriptions and actions.

While the transdisciplinary context might certainly lead to an intensified look, in the last decades architecture has engaged in a process of expansion and adjustment led, in part, by new combinations of old keywords (ecology, landscape, urbanism, infrastructure, logistics…). Beyond disciplinary discourses, contemporary debates addressing the social, ecological and political connotations of architecture are providing a new set of critical words. Adjectives ("post-anthropocentric", "non-human", "inclusive", "transcultural") names ("decolonization", "decarbonization") and phrases ("climate change", "race and gender identity"…), have gained increasing visibility over the last two decades, both to inform and transform architecture's critical thinking. The proliferation of prefixes in many of them (post-, de-, trans-), denotes the urge to build new words and concepts from existing materials, pushed by the speed of contemporary culture. The problem of meaning persistence and change, but also of the tacit positions inscribed in words, can be exemplified by the crucial differences between "post-colonization" and "decolonization".

These and other terms are generated by a sequence of adjustments and oppositions, distortions and borrowings. The study of such processes, not in strict etymological terms but in a broader sense including the complex relations between words, practices, disciplines, is key to unveil the cultural and ideological positions behind current architectural debates. We propose to carry out this critique as a tool to explore today's emerging terminologies, and the ones to come.

The 5th edition of Critic|all Conference welcomes contributions that critically address the uses and misuses, the creation and wearing, the transformation and timeliness of the words with which architecture is – or has been – described, historized or updated through time. We expect interpretive work that draws new relations between words, concepts, things and practices, not strict etymological studies.

The most basic structure should present the expression or word under scrutiny, explain the reasons that justify the choice, formulate new interpretations or perspectives stemming from it, support these with arguments in the main body and bring the paper to a conclusion.

03 | Conference Program

TUESDAY 10·10·2023

All schedule indicates local time in Delft, NL (UTC/GMT +2 hours)

	09:15 - 09:30	Welcome and Presentation
panel #1 *Revisited Terms*	**09:30 - 11:00**	*Faculteit Bouwkunde TU Delft* *Berlagezaal 1*
Elisa Monaci *Università Iuav di Venezia, Italy*	**09:35**	Kitsch. Learning from Ordinary Dreams of Architecture
Francesca Gotti *Politecnico di Milano, Italy*	**09:50**	Critical Spatial Practices: Inhabiting an Ever-changing Term
Jana Culek *Delft University of Technology, Netherlands* *University of Rijeka, Croatia*	**10:05**	(Re)Defining Utopia. The Changing Concept of an Ideal World
Carla Molinari (1) and Marco Spada (2) *(1) Anglia Ruskin University, United Kingdom* *(2) University of Suffolk, United Kingdom*	**10:20**	Past and Future of Townscape. For a Humane Urbanism (*)
Session Chair: Marcos Pantaleón *Universidad Politécnica de Madrid, Spain*	**10:35 - 11:00**	Discussion
Welcome by BK Dean **Dick van Gameren**	**11:00**	*Berlagezaal 2*
Coffee Break	**11:00 - 11:30**	*Berlagezaal 2*
panel #2 *Modern Genealogies*	**11:30 - 13:00**	*Berlagezaal 1*
J. Igor Fardin and Richard Lee Peragine *Politecnico di Torino, Italy*	**11:35**	The promise(s) of sustainability
Cássio Carvalho and Alexandra Alegre *Universidade de Lisboa, Portugal*	**11:50**	Visions on Democratic Architecture
Frederico Costa *Universidade Estadual de Campinas & Fundação de* *Amparo à Pesquisa do Estado de São Paulo, Brazil*	**12:05**	Nostalgia for Backwardness. Investigating the Persistent Influence of Modernity on Brazilian Contemporary Architecture
Öykü Şimşek *Istanbul Technical University, Turkey*	**12:20**	Vulnerable architecture as a/n (im)material assemblage
Session Chair: Heidi Sohn *Delft University of Technology, Netherlands*	**12:35 - 13:00**	Discussion
Lunch Break	**13:00 - 14:00**	*Berlagezaal 2*
panel #3 *Situated Terms*	**14:00 - 16:00**	*Berlagezaal 1*
Mohammad Sayed Ahmad (1) & Munia Hweidi (2) *(1) Tohoku University, Japan* *(2) Sophia University, Japan*	**14:05**	Space, Makan, Kūkan. Phenomenology of Space through Etymology
Khevna Modi *CEPT University, India* *Carnegie Mellon University, USA*	**14:20**	Word, Associations, and Worldviews. A case of pol Architecture of Ahmedabad (*)
Marine Zorea *Kyoto Institute of Technology, Japan* *Bezalel Academy of Art and Design, Israel*	**14:35**	Speaking of Collective Dining. The Spatial, Social and Semiotic Realities of the Kibbutz Dining Room
Lola Lozano *Architectural Association, UK*	**14:50**	Redistribution: Domestic space and Land Sharing in Mexico City's urban centre
Hanxi Wang *Cornell University, USA* *University College London, UK*	**15:05**	HOME-steading. Subversions, Reversions, and Diversions of the Moral Right to Space

Session Chair: Janina Gosseye   **15:20 - 16:00**   Discussion
Delft University of Technology, Netherlands

Coffee Break   **16:00 - 16:30**   *Berlagezaal 2*

panel #4   **16:30 - 18:30**   *Berlagezaal 1*
Expanded Meanings

Clarissa Duarte and Mariana Magalhães Costa   **16:35**   From sustainable development to sustainable (urban)
Université Jean Jaurès (UT2J), France   engagement: The evolution of a concept

Haitam Daoudi   **16:50**   A relational approach to performance. Composition of
Universidad Politécnica de Madrid, Spain   meaning through Price and Ábalos

Grayson Bailey   **17:05**   Architecture / architectural
Leibniz Universität Hannover, Germany
Association for the Promotion of Cultural Practice in
Berlin, Germany

Zeynep Soysal   **17:20**   Platform: as an Architectural Ecotone
Atilim University, Turkey   Transtemporal

Maria Kouvari and Regine Hess   **17:35**   Unlocking Time in the Architectural Discourse
ETH Zurich, Switzerland

Session Chair: Alejandro Campos   **17:50 - 18:30**   Discussion
Delft University of Technology, Netherlands

Dinner   **19:00 - 21:30**   *Huszár, Delft*

(*) presenting remotely
(**) by express desire of the author the full article is not included in these digital minutes

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WEDNESDAY 11·10·2023

All schedule indicates local time in Delft, NL (UTC/GMT +2 hours)

panel #5   **09:00 - 11:00**   *Berlagezaal 1*
Projective Language

Cathelijne Nuijsink   **09:05**   Redefining Architecture from an Undecidable
Massachusetts Institute of Technology, USA   'Anybody'. The Anybody Conference in Buenos Aires,
1996 (**)

Caterina Padoa Schioppa   **09:20**   Composting Death. Towards a Body Sublimation
Sapienza University of Rome, Italy

Federico Broggini and Annalisa Metta   **09:35**   Mundus. Designing landscape as wholeness,
University of RomaTre, Italy   thickness, and fertility

Silvia Calderoni   **09:50**   Architecture, transfeminism, queerness: reimagining
CIRSDe, Interdisciplinary Centre for Research and   the urban space
Studies on Women and Gender, Italy

Marco Spada (1) and Carla Molinari (2)   **10:05**   Industrial Pastoralism. Post-productive arcadias in
(1) University of Suffolk, United Kingdom   machine-modified landscapes
(2) Anglia Ruskin University, United Kingdom

Session Chair: Mariana Wilderom   **10:20 - 11:00**   Discussion
Universidade de São Paulo, Brazil

Coffee Break   **11:00 - 11:30**   *Berlagezaal 2*

Keynote Lecture   **11:30 - 12:30**   *Berlagezaal 1*
Albena Yaneva   **Don't Fly, Don't Jump:**
Critical Proximity in Architectural Research

Lunch Break   **12:30 - 13:30**   *Berlagezaal 2*

panel #6   **13:30 - 15:30**   *Berlagezaal 1*
Translated Terms

Xuerui Wang   **13:35**   The Term "Architectural Art" in the 1950s Chinese
Tongji University, China   Architectural Theory. A Semantic Transplantation (*)

Miho Nakagawa   **13:50**   Analysing English translation of ma interpretations
University of East London, United Kingdom   between the 1960s and 80s (**)

Mustapha El Moussaoui   **14:05**   Going Back Home/House. Unravelling Linguistic and
Free University of Bolzano, Italy   Existential Differences

Marcela Aragüez   **14:20**   From Kankyō to Environment to Enbairamento.
IE University, Spain   A Mutating Concept Between Intermedia Art and
Architecture in Post-War Japan

Ye Chen   **14:35**   Comparison of Jiàngòu and Kekkō. Differences in
Nagoya Institute of Technology, Japan   Terminology Translations of Tectonic Between China
and Japan in *Studies in Tectonic Culture*

Session Chair: Marcos L. Rosa   **14:50 - 15:30**   Discussion
Universidade de São Paulo, Brazil

Coffee Break   **15:30 - 16:00**   *Berlagezaal 2*

Round Table   **16:00 - 17:15**   *Berlagezaal 1*

Break   **17:15 - 17:45**

Keynote Lecture   **17:45 - 18:45**   *Oostserre*
Adrian Forty   *Words and Buildings* **Revisited**

Closing Ceremony   **18:45 - 19:45**   *Oostserre*

04 | Index of selected papers

05 ▎ Papers

From *Kankyō* [環境] to Environment to *Enbairamento*
A Mutating Concept Between Intermedia Art and Architecture in Post-War Japan

Aragüez, Marcela
IE School of Architecture & Design, IE University, Madrid, Spain, marcela.araguez@ie.edu

Abstract

The term 'environment', one of today's buzzwords, was adopted in post-war Japanese artistic circles to convey ideas related to atmospheric design and control from a variety of perspectives. Transpacific connections around environmental art, like those between Alan Kaprow and the *Gutai* Group, led to an insightful cross-cultural mutation of the word from the 1950s onwards. Firstly, the English term 'environment' became common in Japan to substitute its local counterpart, *kankyō*. In addition, using the katakana syllabary to phonetically adapt foreign words, 'environment' was turned into *enbairamento* to define a collective group of artists, musicians and critics engaged in the production of interactive and intermedia art and architecture. These three versions of the same word, *kankyō*, environment and *enbairamento*, illustrate Japan's ability to acquire foreign concepts while tweaking their forms and meanings beyond their imported sense.

This paper reflects upon the multiple conceptions of 'environment'-*kankyō*-*enbairamento* by unfolding a series of spatial practices taking place in post-war Japan. The local notion of *kankyō* is discussed especially through the work of Takashi Asada – the silent mentor of the Metabolists and Kenzo Tange's right hand – on the creation of shelters for extreme climatic conditions and through his 'Research Centre for Environmental Development and Design' [*kankyō kaihatsu center*]. The 1966 exhibition 'From Space to Environment' [*kūkan kara kankyō e*], and the theories put forth by the 'Environment Society' [*enbairamento no kai*] are analysed to illustrate important transpacific interactions around environmental art. Lastly, the International Exposition celebrated in Osaka in 1970 is presented as a culmination in the production of environmentally controlled spaces – particularly visible in the performative devices of the Expo's central venue. This paper therefore demonstrates the significance of 'environment' beyond western meanings, while illustrating the fundamental contribution of Japanese architectural and artistic culture in the formulation of its uses related for the architectural discipline.

Key words: environment, post-war, Japan, cybernetics, interaction.

1. Environment: A post-industrial term

In his book *Surroundings: A History of Environments and Environmentalisms*, historian of science Etienne Benson notes how the notion of environment became familiar in the Anglo-Saxon world as late as the second half of the nineteenth century.[1] Parallel to similar words in other languages, such as *Umwelt* in German, *milieu* in French, and *ambiente* in Spanish, the term 'environment' was used to refer to the natural setting as a background for human living, timidly acquiring significance in conversations around preservation at the time. One needs to jump to the emergence of environmentalism in the 1960s to observe a generalised understanding of environment as a precious and endangered habitat both needed and destroyed by humans. It was also during that time that a series of artistic currents adopted the term to expand the limits of their discipline. Notably, environmental art, environmental music, and environmental theatre acquired considerable importance in both mainstream and underground circles. In general, practices under the umbrella of the environmental label seek to expand their impact towards a more spatial and atmospheric dimension, as well as to extend the partaking of the work of art, theatre play, or music piece, to the actions and responses of the audience.

This trend was, by no means, concealed to the frontiers of the Western world. After having experienced a rapid recovery from the destruction of World War II, Japan developed in the 1960s an important hub of experimentation in environmental practices. The closest word to the English term 'environment' in Japanese language is *kankyō*, a word that arguably carries controversial meanings related to the expansive ambitions of the Japanese government during the first half of the twentieth century. This may be one of the reasons why the English term 'environment' became commonly used untranslated in Japan by the 1960s, as well as transformed to '*enbairamento*' – using the *katakana* syllabary to phonetically translate foreign words. The fusion of *kankyō*, environment, and *enbairamento* suggests a close connection between artistic approaches from various nations which aimed to broaden the definition of art, where the incorporation of three-dimensional space and the observer's active role became integral aspects of artistic creations at the time.

This paper reflects upon the multiple conceptions of 'environment'-*kankyō*-*enbairamento* by unfolding a series of spatial practices taking place in post-war Japan. The local notion of *kankyō* is discussed especially through the work of Takashi Asada – the silent mentor of the Metabolists and Kenzo Tange's right hand – on the creation of shelters for extreme climatic conditions and through his 'Research Centre for Environmental Development and Design' [*kankyō kaihatsu center*]. This account traces a connection between investigations related to the construction of prefabricated shelter in cold regions and the development of capsule architecture as one of the flagship components of Metabolism. After situating *kankyō* in this context, the paper moves on to analyse its adoption in experimental artistic circles. The 1966 exhibition 'From Space to Environment' [*kūkan kara kankyō e*], and the theories put forth by the 'Environment Society' [*enbairamento no kai*] are analysed to illustrate important transpacific interactions around environmental art. The work of Arata Isozaki and his investigations in the design of art installations coupled with collaborative research on vernacular environments is singled out as particularly relevant for later developments in architecture. Lastly, the International Exposition taking place in Osaka in 1970 is presented as a culmination in the understanding of environment as a human-controlled space – a condition that becomes predominantly apparent in the performative devices of the Expo's main events venue. The research therefore demonstrates the significance of 'environment' beyond Western meanings, while it unfolds the fundamental contribution of Japanese architectural and artistic culture in the formulation of uses related to the architectural discipline. The present paper does not intend to produce an exhaustive definition of environment/*kankyō*, neither it is the goal to expose a complete account of its uses and translations in Japan. Rather, the argument adopts the uses, misuses and mutations of the concept at hand as symptomatic of an architectural practice in post-war Japan in constant search for the creation of interactive spaces by means of controlling an expanded field of action.

2. Seeking interaction: environment in the art field

American artist Allan Kaprow (1927-2006) is acknowledged to have been the first artist to explicitly use the term 'environment' in the art discipline during the 1950s. Kaprow was inspired by Jackson Pollock, whose large, gestural canvases broke free from the confines of the walls to attain a spatial quality. In fact, one of the first articles written by Allan Kaprow, on the occasion of Pollock's untimely death in 1958, entitled 'The Legacy of Jackson Pollock', highlights the spatial condition of Pollock's work and how he was 'in' his paintings, with the size of the canvases allowing the paintings to transcend their medium.[2] Kaprow interpreted this sense of liberation through his 'environments', which he achieved by performing a novel integration of movement, space, and audience participation (Fig. 1). However, while pursuing the active involvement of viewers and the provocation of unforeseen reactions, Kaprow's environments were also carefully planned, codified in a set of guidelines and rules that left little space to chance.[3] The liberation of the work of art from its medium and the participation of the observer was delineated by a preconceived system of actions over time.
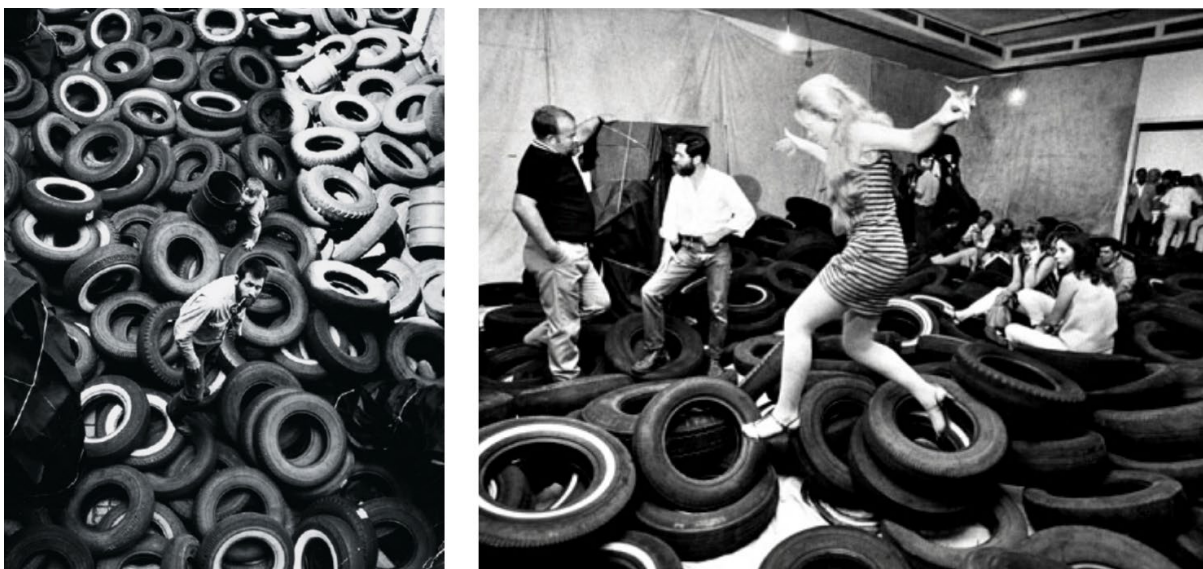
Fig. 1

A few years later, the term environment became commonly used in the performing arts. Drawing upon earlier currents such as the British Agit-Prop theatre – with influential advocates like Joan Littlewood's Theatre Workshop – and the *Commedia dell'Arte*, Richard Schechner and the Performance Group coined the term 'environmental theatre' in 1968. The Performance Group fostered the use of improvisation techniques and a close interaction between audiences and performers. Schechner's 'Six Axioms for an Environmental Theatre' defined the need to question the dichotomy between expectation and obligation in a theatre space, as well as the breaking down of boundaries between audience and performers. The Six Axioms are outlined as follows:[4]
– The theatrical event is a set of related transactions.
– All the space is used for performance; all the space is used for audience.
– The theatrical event can take place either in a totally transformed space or in "found space".
– Focus is flexible and variable.
– All production elements speak in their own language.
– The text need be neither the starting point nor the goal of a production. There may be no text at all.
The second axiom in particular, 'all the space is used for performance; all the space is used for audience,' directly established a belief in the need for non-hierarchical theatre spaces in which unforeseen interactions are produced. The third axiom, 'the theatrical event can take place either in a totally transformed space or in "found space",' questioned in turn the usefulness of traditional, fixed theatre typology.
Actions, and by enlarge, interactions, were also integrated in the work developed by the Fluxus artists around the same time. The movement had established during the first years of the 1960s a loose centre of operations in New York, but its network expanded worldwide, in particular across Germany, Italy and Japan.[5] Works produced by Fluxus artists were conceived from investigations of ideas related to chance and temporality by means of urban performances, participatory installations and the production of provocative objects. The important Japanese branch of the movement was most notably represented by the work of Kuniharu Akiyama, Ay-o, Yoko Ono, and Toshi Ichiyanagi.[6] The Sōgetsu Art Centre in Tokyo became a space for encounters between these international artists from Japan and those operating from the country, as well as the venue to welcome experimental artists from the West. But before such exchanges started to take place, environmental practices had emerged within the architectural discipline from the experimental work of Takashi Asada – Tange Lab's chief assistant at the University of Tokyo and a key figure for the understanding of the Metabolist movement.

3. The origins of *kankyō*: a war-related root
As early as 1957, Asada led the design of the Showa Station in Antarctica (Fig. 2), a capsule-like building that was part of the Japanese Antarctic Research Expedition – the first of its kind established by the Japanese government. Asada, considered the 'godfather' of the Metabolists and a key figure facilitating bridges between the academic, professional, and governmental milieus in post-war Japan, has also been regarded as a pioneer in the conceptualisation of *kankyō* in architecture and urban planning.[7] In fact, well before the design of the Showa Station, Asada had already devoted part of his work to the development of shelter for challenging climatic conditions. His graduation thesis of 1942 from the then Tokyo Imperial University, entitled 'Treatise on Japanese National Architecture', was aligned with the expansionist aims of the Japanese government initiated in the 1930s. Toyokawa Saikaku argues with this respect that such expansion was inextricably linked with the proliferation of self-built human shelter

for colonisers, a kind of proto-capsule typology that was widely researched, typified and implemented during the late 1930s and early 1940s in the occupied regions of Manchuria and Mongolia.[8] The development of this capsule architecture was the result of investigations taking place in academia followed by the funding in 1939 of the Continental Science Institute in occupied Manchuria and the Institute of Low Temperature Science at Hokkaido University in 1940. Asada's Showa Station was in fact greatly influenced by these wartime investigations on capsule architecture in extreme environments, and it is considered a fundamental prototype for the design of capsule-like spaces later on in Japan.[9] The design criteria for the station was to comply with the extreme atmospheric conditions of the site, such as a minimum temperature of minus 60º, continuous wind speed of 80 m/s, and expected snow coverage on roof surface of up to 2 meters.
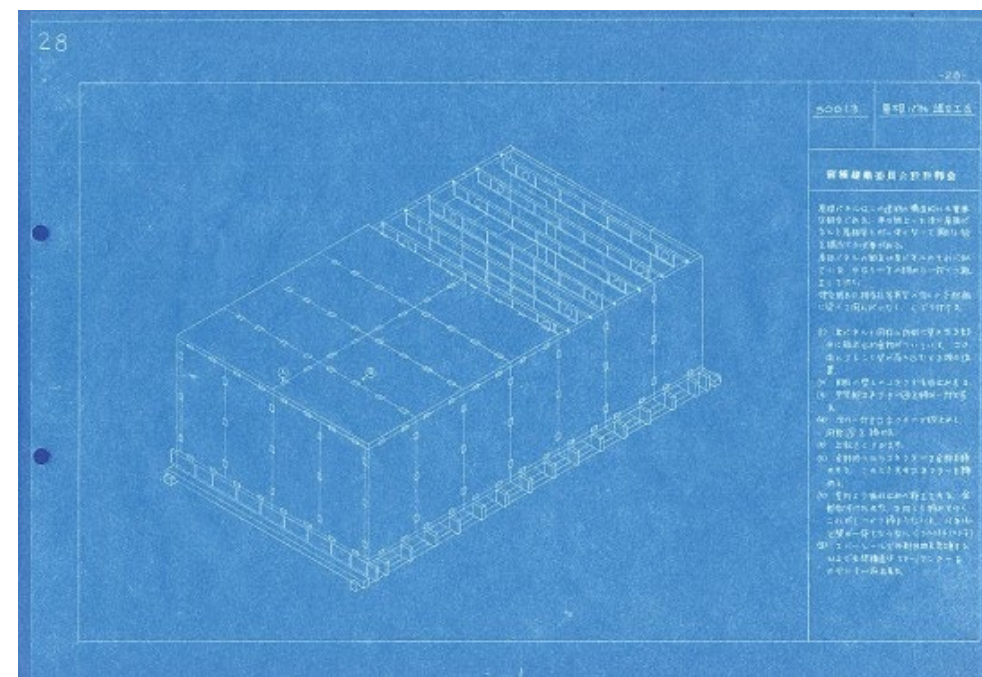
Fig. 2

After Asada's incursion in the creation of shelter for extreme environments, he left Tange Lab and devoted himself to urban planning research and consultancy. In 1961, he founded the 'Research Centre for Environmental Development and Design' [*Kankyō Kaihatsu Center*], and his theory was later compiled by metabolist member Naboru Kawazoe in 1969 under the name 'Theory of Environmental Development' [*Kankyō Kaihatsu Ron*]. Throughout his prolific non-building career, the work of Asada became difficult to pinpoint and has escaped historiography to this day. His ideas are more clearly identified in two projects for children: *Kodomo no Kuni*, a natural park in Yokohama (1962-72) and *Goshikidai* in Kagawa, a Science Museum (1965-71).[10] *Komodo no kuni*, in particular, represents well the method Asada seek to develop in his Research Centre for Environmental Development and Design. The area was conceived as a welfare facility for children funded with both government and private investment in a former ammunition land of about 100 hectares. The land was turned into a landscape playground with the insertion of devices designed by Isamu Noguchi and Kiyonori Kikutake among others. Asada conceived this landscape for children as a space for individual development away from the standardisation of regulated education. However, the natural environment of the children's park is conceived by Asada as a highly artificial habitat, one in which 'the greenness of trees can only become nature able to interact with humans when artificial hands take part'.[11] Nature is therefore meticulously manipulated; *kankyō* is translated here as an artificial infrastructure for human development, as human-led as an architectural space or an exhibition venue.

4. *Kankyō* and experimental art: environment - *enbairamento*
According to art critic Noi Sawaragi, it was due to the imperial connotations of the term *kankyō* outlined above that experimental artists used it with reservations, adopting instead the English term 'environment' to be loaded with a renovated meaning. Art historian Midori Yoshimoto, however, suggests that such adoption was due to the limitations of *kankyō*'s etymological meaning.[12] The term is composed by two kanji, the first one meaning 'loop', and the second one 'border'. It is precisely the circumspect significance of the term in Japanese, Yoshimoto argues, that artists of the 1960s aspired to transgress. In addition to the expanded notion of art developed by Kaprow with his environments, the Japanese *Gutai* had defied artistic conventions with action paintings and interactive performance with user

participation already from the mid-1950s. [13] Kaprow's ideas became widely known in Japanese experimental circles later on with the publication in 1966 of his book *Assemblages, Environments and Happenings*. [14] Indeed, Kaprow's book seems to have had a direct influence on the concept, and even the title, of the exhibition From Space to Environment [*Kūkan kara kankyō e*], held at the Matsuya Department Store in Tokyo the same year Kaprow's publication was released. [15] The exhibition was organised by *Enbairamento no kai* [Environment Group], a group of multidisciplinary artists including a young Arata Isozaki, as well as members from the former *Jikken Kobo* collective [Experimental Workshop] and the *Gutai* group. From Space to Environment became extremely relevant in Japan, and while it was not widely known in the West at the time, it certainly preceded the seminal exhibition 'Cybernetic Serendipity' curated by Jasia Reichardt in 1968 at the Institute of Contemporary Art in London. From Space to Environment was accompanied by a series of events taking place at the Sōgetsu Art Centre, a bustling venue hosting experimental performances as well as welcoming important Western artists like John Cage and David Tudor. [16]

Although not as technologically driven as Cybernetic Serendipity, From Space to Environment did incorporate notions related to communication theory upon which cybernetics, a discipline later on related with environmental control in Japan, was grounded. [17] The exhibition layout, designed by Isozaki, presented interactive pieces of thirty-eight multidisciplinary artists, including sculptors, graphic designers, musicians, and photographers, and invited visitors to 'use' the works of art while getting lost in a maze-like spatial arrangement. [18] The exhibits depicted the multiple and loose meanings granted to the term 'environment' in the manifesto that the Environment Group published on the occasion of the exhibition in a special issue of the magazine *Bijutsu Techō* (Fig. 3). They alluded in their manifesto to the fixed notion of the Japanese term *kankyō*, and made sure to include the word 'environment' untranslated and written in capital letters throughout the manifesto. One could argue that the adoption of a foreign word was ideal to, on the one hand, relate to similar artistic trends taking place in the international scene and, on the other, load a fresh term with emergent meanings on interaction and participation.
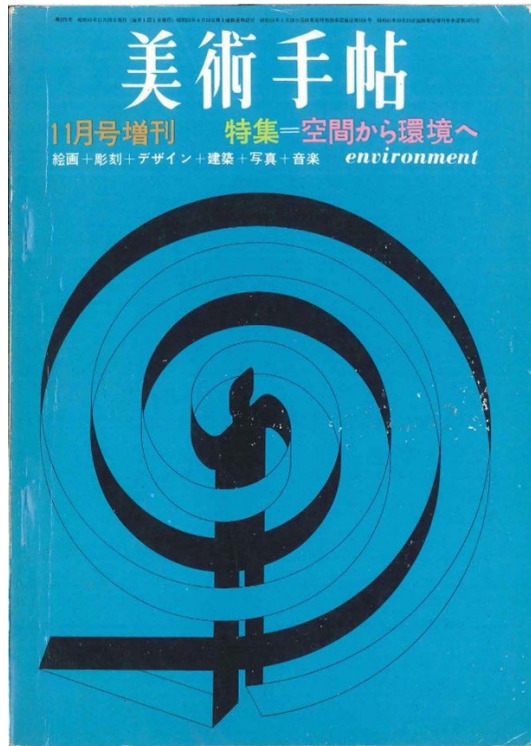
Fig. 3

Following this aim, Isozaki became a kind of mediator in the generation of controlled environments in both art and architectural circles. His partaking in experimental exhibitions, while becoming an important component of Tange Lab, provided him with a productive interdisciplinary position that would singularise his practice from that moment onwards. In line with the environmental goals of From Space to Environment, Isosaki leapts upon the international scene with the installation of 'Electric Labyrinth' for the Milan Triennale. In what can be considered a necessary step between the analogic environmental aims of From Space to Environment and the cybernetic installations of the Expo in Osaka only a couple of years later, Electric Labyrinth consisted of a grid plan of twelve rotating translucent panels, being each of which able to track the visitor's movements (Fig. 4). Each panel was imprinted with variant images displaying the nuclear destruction of Hirōshima and Nagasaki overlaid with a selection of

enlarged traditional *ukiyo-e* representations of alluring but sinister Japanese female ghosts [*yūrei*]. [19] Accompanying these massive pinwheels, Isozaki hung a huge collage of his own making: 'The City of the Future is a Ruin', in which a vast melted-down megastructure stands in ruins above the desolate landscape of post-incendiary Hirōshima. Qualified by Isozaki as an environment, the installation resulted in a total work of art with the inclusion of music composed by Toshi Itchiyanagi, a Japanese pupil of John Cage during the 1950s. [20]

Fig. 4

5. Cybernetic and atmospheric environments: the Expo Osaka 1970

From Space to Environment, as well as singular artistic interventions like Isozaki's Electric Labyrinth, became an essential seed for what would later be known as 'intermedia art'. Adding to past experiences, intermedia art sought to include the input of technologies such as cybernetics, as well as atmospheric devices of sound, light and smoke effects for the creation of interactive environments. The International Exposition celebrated in Osaka in 1970 – only four years after From Space to Environment took place –, became the ideal scenario to test such experiments in intermedia art. The Pepsi Pavilion, produced by the collective EAT (Experiments in Art and Technology), and the performative spaces of the Festival Plaza, which acted as the main events space designed by Isozaki with a group of more than twenty multidisciplinary collaborators, are two of the most illustrative examples (Fig. 5). The Festival Plaza, in particular, was materialised as a so-called cybernetic environment with the aim of adapting its layout to specific events and performances thanks to a central computer system. Heavily inspired by the way Japanese traditional summer festivals unfold in cities, the design of the Festival Plaza was therefore the result of both deeply rooted cultural customs in Japan and the application of interactive technology previously tested in the art field.
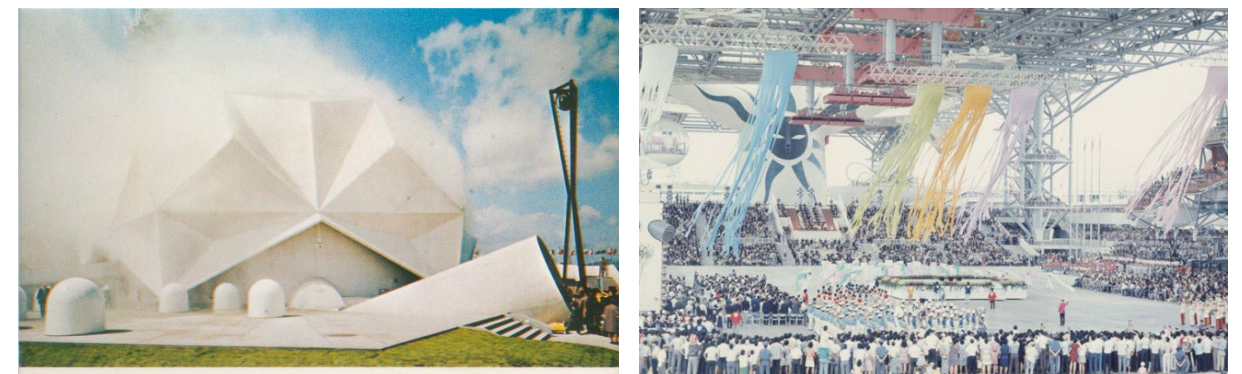
Fig. 5

By the time of the creation of Electric Labyrinth, Isozaki was already working for Expo'70. In addition, in parallel with his involvement in the production of environmental art, Isozaki was carrying out extensive urban research with architectural historian Teiji Itō that would arguably have an important weight in the design of the performance spaces for the Festival Plaza. The research, published in 1963 under the name Japanese Urban Space [*Nihon no toshi kūkan*], was directed toward urban aspects and phenomena found in organic cities. [21] They produced a compilation of performative spaces in the city

that were categorized into three types. The first "Principles of Space Order" explored ways in which certain areas of the city would be both experienced and physically articulated. "Methods of Space Composition" included a series of spatial examples commonly identified in various villages and cities. Lastly, "Activators of Urban Space" focused on the existence of certain landmarks and their way of producing actions in space, such as connecting or dividing certain areas in the city.[22]

Expanding from this research on urban form, and from an involvement on the production of interactive spaces, the Festival Plaza was conceived as an urban infrastructure in which events of all kinds would take place in a more or less controlled fashion.[23] For this project, Isozaki teamed up with artists, musicians, and computer scientists to study the circulation routes and flows occurring during traditional Japanese festivals – street performances that took place during the summer months all around the country.[24] The idea was to extract, interpret, and apply these movement patterns into the changeable configuration of the Festival Plaza. In addition, research for the project investigated using a central computer system to manage and regulate every element of the performances that would take place continuously inside the Plaza. The study included diagrams explaining how elements in the Plaza would communicate with each other, and how the cybernetic system would work to control and regulate inputs and outputs within the Plaza.

The Festival Plaza was realized as an open space defined by a walking space-frame structure supported by large pillars containing elevators. It was created, according to Isozaki, as a space that the people may possibly claim via a sense of "collective excitement."[25] This would be made feasible through a cybernetic system that would modify the layout in reaction to the motion of people, and two performing robots that would move around projecting sound, light, and smoke. However, the cybernetic system never functioned as anticipated, but the arrangement of the area, which was designed as a blend of urban forms and movement patterns, was altered in response to the many acts that took place during the day. Despite the enormous effort put into its development, the Plaza remained far closer to a unidirectional, conventional, regulated events venue than an interactive space in which artists and the public coexisted to create a performance.

6. The Paradox of Post-War Environments

With the cybernetic system failing to work as planned, the Festival Plaza operated in the end like a traditional, one-way, controlled events space rather than as a collaborative environment where artists and audience could interact and produce a shared performance. The designers' attempt to bridge technology and cultural customs, however, illustrates well an ambition of creating planned environments at an architectural scale. The origin of such aspirations may be seen in the exchanges produced in the art field a few years earlier, and the adoption of 'environment' as a term that conveyed the symbolic freedom that *kankyō* did not expressed. The evolution of *kankyō* to environment offers a historical thread that accounts for the transformations occurring in the development of architectural and urban space in Japan during and right after World War II. The understanding of *kankyō* as a habitat to be exploited and colonised during the expansionist years was rejected after 1945, however one could argue that the mutation on the term still kept the human action as a constituent part. The 'design' of environments in the art field, and later on at an architectural scale, seems to keep some of the omnipotence carried out by the pre-war significance of *kankyō*.

The Expo was arguably the most notable occasion for the display of artificially controlled environments in Japan, but it paradoxically coincided with the start of a global acknowledgement on its polluting consequences. It was during that time that heated public debate started to take place around the damaging effects of the massive use of petrochemicals and polymers in the built environment, as well as the indelible effects of the industrial infrastructure coping vast coastal territories around the country. According to Yuriko Furuhata, architects under the Metabolist label were to be blamed for the promotion of polluting practices in Japan and their reliance on the oil economy for the development of their architecture and urban interventions.[26] Even if Metabolist architects such as Kisho Kirokawa were aware of the finiteness of fossil fuels, and became well versed of theories put forth around the dangers of extraction by Kenneth Boulding and Buckminster Fuller, the development of capsule architecture seems to go against the very idea of preserving the environment. In this sense, the extending use of plastic for the creation of replaceable cells were not yet seen as one of the problems of an increasingly polluted habitat.

The dual notion of environment/*kankyō* has been used in this paper as a guiding term, a container of relevant discussions around spatial control, habitation, and performance taking place in post-war Japan. These discussions, far from being contingent of the specific Japanese context, rather align with global trends taking place at the same time. An increasing concern for the preservation of our habitat, and the acknowledgement of human activity as the main detractor of its survival, started to shift at the time the very idea of what building meant. The use of polymers and plastic, once representing progress and innovation, were soon seen as the threats of a rapidly endangered world, particularly after the 1973 oil crisis. Parallel to this, the adoption of cybernetic systems for spatial and atmospheric control was progressively left out from architectural discussions and practice. Today, the implementation of

controlling devices for the transformation of environmental conditions seems to be used for very different reasons than those that moved similar actions in the post-war period. Weather control will soon no longer be a choice, not even an experiment for the production of exceptional phenomenological conditions, but rather imperative for the preservation of a human species that can no longer adapt to the changing and ever more challenging environmental conditions of our planet.

Notes
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Image Captions
Fig. 1. Alan Kaprow's environment 'YARD' in New York City, 1961.
Fig. 2. Blueprint of Asada's Showa Station, from the 'Antarctic Area Observatory Building Manual', October 21, 1957.
Fig. 3. Special issue of *Bijutsu Techō* from 1966 including the manifesto of the exhibition From Space to Environment, and depicting the term "environment" in both Japanese and English. Bijutsu Shuppan-sha.
Fig. 4. Arata Isozaki, 'Electric Labyrinth'. Originally showcased at the 1968 Milan Triennale.
Fig. 5. Left: Sony Pavilion of the Expo Osaka '70 designed by E.A.T (Experiments in Art and Technology). Right: Opening ceremony of the Expo Osaka '70 at the Festival Plaza, with performative devices designed under the leadership of Arata Isozaki.

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Biography
Marcela Aragüez is Assistant Professor and Associate Director of Undergraduate Studies in Architecture at IE University in Spain. She received her PhD in Architectural History & Theory at the Bartlett School of Architecture. Her research focuses on the design processes behind the production of adaptable architecture, with an emphasis on cross-cultural post war practices between Japan and Western countries such as Great Britain and Switzerland. She has lectured widely in the UK, Switzerland, Japan, France and Spain and is a licensed architect with professional experience in Spain and Switzerland. Her research has been acknowledged with grants and awards from institutions including: the Japan Foundation, Sasakawa Foundation, Canon Foundation and the Society of Architectural Historians of Great Britain. She is a member of the Editorial Board of *Architectural Histories*, the journal of the European Architectural History Network, and has published in international journals including *Roadsides* and *Architecture Research Quarterly*.

Architecture / *architectural*

Bailey, Grayson[1,2]

1. Leibniz Universität Hannover, IGT - Architektur Theorie, Hannover, Germany, bailey@igt-arch.uni-hannover.de
2. Association for the Promotion of Cultural Practice, Berlin, Germany

Abstract

Architecture attaches itself with ease to imported terminology and concepts, whether it be scientific (Biomimetic Architecture), social (Social Architecture), technical (Media-Architecture) or theoretical (Xeno-Architecture). However, this fascination with exterior definitions has not been equaled by an enthusiasm with addressing the deficits in its own foundational concepts.

The limit of Architecture's political efficacy has proven intransigent, following the conclusions of theorists Manfredo Tafuri (*Architecture and Utopia*, 1979) and Frederic Jameson ("Is Space Political?", 1995), and has only allowed for lackluster reinterpretations of current institutional agents (Architect, Client, Developer, etc.). However, adjusting the costumes of the players will not change their roles - there can be no possibility of architectural change without shifting the foundational concepts of Architecture. Rather than continuing to merely overlay inter-disciplinary aesthetics, we must look to how conceptual shifts have taken place elsewhere and begin to implement our own changes in architectural understanding.

Political theorist Chantal Mouffe focuses on the realization of radical democracy via agonistic practices, and has done so by developing a concrete difference between practices, roles, operational parameters (Politics) and the "ontological dimension of antagonism" that defines the field of action and possibility (the *political*) (Mouffe 2013; Mouffe 1993; Mouffe 2005). Following the distinctions made by Chantal Mouffe between Politics and the *political*, we can disentangle the institutional set of roles, regulations, market processes, etc. –- Architecture –- from the ontological dimension of spatial appropriation, interiorization, etc. –- the *architectural*. This is a radical conceptual shift with radical potentials in mind. The following paper will be a preliminary overview of the conceptual shifts achieved by Mouffe and how / where these shifts might be implemented into architectural thought in order to open previously blocked avenues of escape.

Key words: Architectural Theory, the architectural, Architecture as Institution, ontological dimension, Chantal Mouffe.

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1. Introduction

"I know it when I see it" is a phrase that comes to mind when thinking about the definitional use of Architecture. Used famously in United States Supreme Court Justice Potter Stewart's judicial description of Pornography, Stewart's opinion when separated from its own object of inquiry seems an apt summary of our shared definition of where our disciplinary focus lies: "I shall not today attempt further to define the kinds of material I understand to be embraced within that shorthand description; and perhaps I could never succeed in intelligibly doing so. But I know it when I see it…"[1] Perhaps this subject also cannot be addressed intelligibly, due to complexity or lack of possible cohesion, and perhaps that will prove true here, however there are more than a few good reasons to attempt to return to the basics of what "Architecture" is, especially if we are to continue to use it as the host onto which we graft so many new extra-disciplinary concepts.

Two of these reasons are presented here as they signify immediate conditions of ongoing socio-cultural transformations. First is the emergence of new socio-cultural modes of communication and investigation, i.e. the development of computational practices and methods for understanding them. For instance, if within Architecture "it no longer seems tenable to base our assumptions solely on human presence and perception" – which includes the digital and ecological non-human agents that surround us – then we certainly should not assume that Architecture remains the same referent.[2] Recent architectural scholarship has followed media studies into the directions of material archaeology – such as in John May's *Signal Image Architecture* – and that of organizational protocols – as prescribed in Keller Easterling's *Medium Design*.[3,4] However, May's review of software politics and Easterling's vision of a protocological architectural culture both avoid the middle field which anchors these ends of conceptual application and technical implementation. In *The New Technological Condition*, Georg Vrachliotis comes closer to this definitional clarity with an investigation into the historical relationship of Architecture and cybernetics, however the ideological and technical connections between the two fields of thought never actually become definitive.[5]

Secondly, the political efficacy of Architecture – its ability to produce counter-structural positions or other forms of emancipatory conditions – has been largely surrendered based on the prevailing definition. In Manfredo Tafuri's conclusion to *Architecture and Utopia* there is an inability of the Architect or of Architecture to emancipate itself from within the system.[6] In addressing the similar question of whether there is a political efficacy of disciplinary spatial practices, Fredric Jameson also comes to the conclusion that the possibility of an emancipatory form of space is unlikely to emerge from the economic and cultural conditions of Architecture.[7] These theories of defeat have been largely accepted in political writing on Architecture as an extension of capitalist realism. In the subsequent writing on the topic of political efficacy and Architecture (in particular Peggy Deamer's *Architecture and Capitalism*, Nahiji's *Can Architecture be an Emancipatory Project*, and Tahl Kaminer's *The Efficacy of Architecture*) there is a forfeited approach to restructuring architectural production, based on Tafuri and Jameson's earlier conclusions, because the conditions which were true are, in fact, still true – perhaps even more so.

In reaction both to the new challenges of digital cultures to the old definitions of architecture and the delimitations of Architecture's political efficacy, what is suggested here is a definitional reorganization. In the current conditions (economic, cultural, environmental) and with the current definition (Architecture), radical movement is not possible. Since the conditional side of this is immovable, any shift of potential for political or cultural reevaluation must come about on the definitional side. Centrally, this is a call for a renewed definition that explains the conditions and moments of architectural production.

In approaching an augmented definitional set for Architecture, there is an inevitable precedent for investigating the contemporary milieu in which a discipline establishes itself: political theorist Chantal Mouffe's paired definitions of Politics and the *political*. From Mouffe's writings on the political effects of the "democratic revolution", the emergence of hegemonies, and the quality of antagonism, many of her concepts have immediate relevance when examining what an expanded definition of Architecture might be. In the following paper, the central concepts used by Mouffe in constructing a definitional set for political theory will be examined, and the effect of similar conceptual turns in architectural theory will be reviewed.

2. The Democratic Revolution and Articulation

Mouffe believes that a profound political transformation between the era of political power embodied in a single person via a transcendental authority and that of the modern era has taken place, replacing the direct occupier of power with 'an empty place' in which the systems of governance are now oriented to temporarily fill an unoccupiable position.[8] This transition opened up the possibility of modern democracy, socialism and totalitarianism, as the political field becomes responsive to the derivative agencies of the public.[9] This new presence of the 'people' within political consideration implicates indeterminacy within the political field, one which voids any possibility of permanent occupation of power in the same manner of the previous era. In this context, even in the most

authoritative of political structures in the modern era is an extended lease on the 'empty place' of power, and would not be able to institute any finality to political control.

In their collaborative work *Hegemony and Socialist Strategy*, Mouffe and political philosopher Ernesto Laclau define this impossibility of finality as a 'lack of totality' which ultimately encompasses all of social activity and, thus, discursive structures. Seemingly enclosed concepts and bodies, such as 'Society', are revealed to be inherently incomplete, as they always contain frontiers which must be left unresolved.[10] This lack of totality, of finality, is claimed to be due to "overdetermination", which pervades all meanings, political and otherwise. Mouffe and Laclau describe overdetermination as the social and linguistic contingencies which undermine the fixing of all discursive meanings, and this overdetermination is foundational for the emergence of new political identities and perspectives.[11] New voice and identities are created through the practice of articulations, which "*consists in the construction of nodal points which partially fix meaning; and the partial character of this fixation proceeds from the openness of the social, a result, in its turn, of the constant overflowing of every discourse by the infinitude of the field of discursivity* [emphasis from source]."[12]

Small articulations build into discursive structures which are self-reinforced enough to seem infinitely stable, and as these discursive structures anchor political and social meanings, they relate to the formation of hegemony. Mouffe and Laclau extend Antonio Gramsci's concept of Hegemony in the direction of social discourse, and describe it as "quite simply, a political *type of relation, a form*, if one so wishes, of politics; but not a determinable location within a topography of the social."[13] The political project of building hegemony is always precarious and never finished, and as such the subject identities within hegemony are also determined by its "logic of articulation and contingency", which indicates that the political structures which organize human agencies as well as the specifics of those human agencies are always immanently subject to destruction or reorientation due to their lack of totality.[14]

The precarity of the discursive field requires consistent articulations to maintain the legitimacy and standing of the current political order, and any form of resistant sector – such as Marxist "Class Unity" – also requires "articulatory form" in order to become a political identity.[15] The practices of negotiating a full range of conflicting articulations, which take place via word and action, are thus of a game-like nature between agencies equally defined discursively by their differences. Mouffe claims that political identities are "necessarily plural, discursively constructed and entangled with power relations," and that construction entails a "dimension of the 'we', the construction of the friend's side, as well as the dimension of the 'them', the constitutive aspect of antagonism."[16] It is in this context that Mouffe thus bifurcates the political field into a binary definition: Politics and the *political*.

2.1. Politics / *political*

In the course of three books over the nature of the *political* (The Return of the Political, The Democratic Paradox, Agonistics), Mouffe builds out the binary definition of Politics and the *political* as a differentiation between an ontological dimension and the Institutional set which organize the affordances of this dimension. She describes the *political* as "the ontological dimension of antagonism", and Politics as "the ensemble of practices and institutions whose aim is to organize human existence."[17] In terms of this "ontological dimension of antagonism", Mouffe rebuts and extends NS Jurist Carl Schmitt's critique of liberal democracy: "By drawing our attention to the centrality of the friend/enemy relation in politics, Schmitt makes us aware of the dimension of the political that is linked to existence of an element of hostility among human beings."[18] The *political* becomes the dimension of all actions, events and organizations which engage in this antagonism in order to establish a necessarily oppositional vision of the world and its direction of organization, i.e. a hegemonic formation. As an ontological dimension, Mouffe further provides that the *political* "cannot be restricted to a certain type of institution, or envisaged as constituting a specific sphere or level of society. It must be conceived as a dimension that is inherent to every human society and that determines our very ontological condition."[19]

Politics is then defined as an ensemble within the field of the *political*, reminding that "these practices, however, always operate within a terrain of conflictuality informed by 'the political'."[20] The senate, the vote, and the Molotov cocktail thrown at the visiting head of state are equally situated in the *political*, even though only two them are within Politics. The *political* defines a field of play in which Politics resides. And Politics is a structuring of roles, practices, behaviors which are deployed to manage the potentials of the *political*. In this manner, the Liberal-Democratic form of government preferred by Mouffe is but one of many possible institutions, and each of these possibilities are constituted simultaneously by their broadest outline and finest details. US democratic Politics is equally an institution based on voting, as it is in the rules of the senate floor, the role of the litigator in front of the Supreme Court, the limitations enshrined in the constitution on who is able to run for federal office as well as the yearly budget of Cook County's Comptroller. Politics is thus a structure of social behaviors, an agreed upon list of should and shouldn'ts, which correspond to the rules of engaging with antagonistic sets of 'us' and 'them'. If Democracy is one mediation of the *political*, Totalitarianism,

Socialism and Anarchism are others, each with different sets of practices, allowances, strategies and tactics for engaging in the game of friend and foe.

Mouffe's work in the definition of Politics and the political has a two-fold thesis: (1) that the political dimension is one of immanent antagonistic potential which cannot be eradicated, and (2) that the liberal-democratic governments must fortify their institutions with radical democratic policies which positively understand the immanence of potential antagonism, instead of negating this possible antagonism in lieu of a belief in final consensus or terminal agreement. The first thesis is a dispassionate explanation of the field of play, while the second is a passionate call for a specific style of play within the given conditions.

Mouffe writes, "One task of a modern democratic philosophy, as I see it, is to provide us with a language to articulate individual liberty with political liberty so as to construe new subject positions and create different citizen' identities."[21] She posits that any functional form of Democracy must in turn be based in the acceptance that division and conflict is unavoidable and that any solution to rival claims will only be temporary. It is foundational for a Politics that understands that the "common good can never be actualized, it has to remain a lower virtue to which we must constantly refer but which cannot have real existence. It is the very characteristic of modern democracy to impede such a final fixation of the social order and to preclude the possibility of a discourse establishing a definite suture."[22] Any failure to recognize this impossibility of final consensus, according to Mouffe, is the creation of institutional structure that is bound to be degraded due to its inability to manage the intractable dimension of the *political*.

3. From Politics to Architecture

Mouffe's binary definition of Politics and the political – institutional set versus dimensional quality – does very well for political theory, as it (a) describes the environment in which political meaning is constructed, (b) orients the role of Politics towards the organization of this environment and (c) argues for a certain mode of organizing which acknowledges the limits of the environment in which Politics is situated. In developing a new form of definitional specificity for Architecture, Mouffe's method of examining behavioral and material sets against an ontological dimension provides an interesting protype.

With a bifurcated definition which examines the socially constructed manner of regulating our built environment (Architecture) posed against an underlying dimensional quality (architectural) we can hope for (1) a framework for a more objective understanding of the institutional practices, roles and processes within Architecture (as well as their possible alternatives), (2) a context of working / understanding *architectural* creation and occupation which is not contained within the institutional Architecture, (3) a view on how and when Architecture and the architectural are directly related or not. This is not an immediately perfect outcome, but a start to the process of re-understanding the conditions and limits of a discipline versus the possibilities within a field of action.

The definitional bifurcation of Architecture is necessarily intuitive and messy. In mapping the Mouffe's transformation onto Architecture, we can first assume some basics about Architecture and the *architectural*. Architecture must represent an institutional set of practices, regulations, roles and other complex rituals, materials and behaviors with which the Architect, the design studio, historical canon, and many other items are connected. The *architectural*, on the other hand, must be something much more expansive and disloyal, and which describes the ways in which a heretofore undefined ontological dimension is present. With Mouffe's definitions of Politics and the political, a political action was not necessary Politics, and every aspect within Politics is not necessarily political. Within Architecture and architectural this is the same: objects of Architecture are sometimes architectural and sometimes not, and architectural objects, architectural actions, or architectural concepts are sometimes within Architecture and sometimes not. With the ramifications of this separation in mind, we must first explore what Architecture includes – at least in its current form – and then begin to isolate what the architectural dimension is.

3.1. Architecture

Architecture is an institutional ensemble, a socially mediated set of practices and agencies, nothing more or less. However, defining this or any institutional ensemble is quite complex. For now, we'll begin to pull out elements within Architecture which are important to note, and otherwise examine inclusions which problematize the coherency of a unified definition of Architecture.

The Architect is unarguably a role within Architecture, even while its conceptual stability is also questionable. In some ways, the Architect is the role that organizes other roles in relation to the building process. In other ways it is the role that presents the building proposal in potentially convincing manner. And yet in others the role that spends most of their time toiling in 3D and 2D software to produce interesting enough visuals for the next presentation meeting. Or managing a BIM database. What the Architect is *not* is the essential conceptual mastermind of a building design. While this might rarely be the case, the basic conceptual building blocks of design are most often provided

by the client or developer in terms of program, size and location, and by the regulatory State in terms of what building area is possible, how dense or high the area is able to be developed, and how long the corridors may be in terms of fire chamber isolation. Even the central role of the Architect has been quite malleable, moving from Master-Builder into writerly delimiter of the buildable via specifications into the organizer of fluid human systems.

The Architect, like the Politician, has a set of role-related regulations of inclusion (ranging from none to many variations of education, experience and examination) which are different depending where and when you examine Architecture. Once verified as having met the necessary set of criteria, the Architect is often included within a professional chamber (Architektenkammer, AIA, RIBA, etc.), which in turn contributes to the organization of education, regulation and practices of the role. Cultural aspects of this role (the class self-identification of the Architect, the former glorification of unpaid labor, the prominent exclusion of color in clothing, etc.) can be assumed to be internal to Architecture as well.

The Architecture Office (or Design Studio) is within Architecture as a prominent professional site that organizes the labor of the Architect. This labor concerns, but is not limited to, the production of Media which communicates the intricacies and specificities of the Project. As John May examines in *Signal Image Architecture*, the basic actions of these media have been unevenly transformed from representational drawings into presentational images of contingency through a digital revolution in information.[23] The clarification of output has intimate implications on the material production of the Architect, whether as the delimiter of acceptable ranges, oracle of future possibility, middle-person of creative labor, or as dynamic system organizer.

The Building is also unarguably an object of Architecture, depending on its acceptance within the terms of canon. Usually, the Building and the Architect are blindly connected, although this is not a requirement. From Bernard Rudolfsky's *Architecture without Architects* on, there have been a number of attempts at separating the professional role from the position of the Building within Architecture.[24] This does not fully threaten the Architect's prominent role within the institutional set, as this contradiction is a mild one considering how much of the regulatory system has been managed to require the role of the Architect as one of the professional seats of financial and legal liability.

This institutional view of Architecture begins to emerge as exactly the environment of deflated critique given by Tafuri and Jameson. The Architect / Architecture Office / Building / Drawing have no agency to produce critical or political change within Architecture in their institutional form. However, as an institutional structure, Architecture can be examined in similar manner as Politics, and its roles and practices similar to those within Politics. And the first meaningful perspectival shift comes in the realization that there is general ability to either shift or reconstruct the institutional set. As a socially constructed environment, any immediate form of Architecture is examinable as an option among a field of options. Just as Democracy contains a wide set of adjustable parameters, and can be generally contrasted against Socialist set of structures, Architecture here and now is able to be adjusted on the institutional level. Much of the work of the Architecture Lobby, or other organizations focusing on the labor rights of Architects, can be seen to concern itself with the institutional parameters of the Architect.

As for the role of the Architect in revolutionizing Architecture itself, a more practical perspective might be best. In terms of Politics, Mouffe notes that artists "can no longer pretend to constitute an avant-garde offering a radical critique" and that they settle into the disciplinary focuses which are at hand. For artists, she describes this disciplinary focus as "constructing new practices and subjectivities" in order to help "subvert the existing configuration of power."[25] While Mouffe provides an optimistic version of the artist's capacity, anarchist and architect Colin Ward creates a more practical focus of work in his division of the architect from "Anti-Architect". He writes: "architects, like teachers, are victims of 'role-inflation' and we cannot expect more of them than that they do their job competently, though in the course of doing so they may very well become 'anti-architects' in the same way as some very competent and thoughtful teachers become 'de-schoolers'."[26]

Following the parallel of hegemonic corruption, Mouffe and Laclau concluded that it is "not the poverty of signifieds, but, on the contrary, polysemy that disarticulates a discursive structure."[27] If this would appear to be true for political or cultural meaning, it can certainly be applied to Architecture. The destabilization of Architecture is achieved not through a singular meaningful contradiction, such as that of the Architect's relation to possible built environments, but through the description and exacerbation of a myriad of contradictions which simultaneously appear throughout the institutional set. Of course, Mouffe's view on the role of institution in political theory is far from a call for abolishment. As a believer in the necessity for structural organization of the political body, Mouffe sees the political institution as a fundamental requirement: "There will always be antagonism, struggles and division of the social, and the need for institutions to deal with them will never disappear."[28] Mouffe places the requirement for Politics to shift in order to accommodate the insoluble presence of the political – the institution is necessary, but required to be organized around the immanent potentials of antagonism if it hopes to remain uncorrupted. This is to reiterate, that regardless of one's preference

for the presence or non-presence of an organizing institution, that the possibility of an organizing institution does not imply an a priori requirement for the current state of things. This would indicate that Architecture is a workable set which can be reorganized. Furthermore, one might assume that, similar to the political focus of Mouffe's work on the theme of Radical Democracy, any productive reorganization would be responsive to the dynamic tensions of the *architectural* in order to provide a structure not limited by an oppressive ideological direction.

3.2. *architectural*

If Architecture is a socially mediated set of practices determined either by the culture of the discipline, the financial incentives of the market or the regulatory limitations of the state, but still constructed within the expansive field of the *architectural*, we must now engage with what defines the *architectural* as an ontological dimension. As an initial position, I propose that interiority is the architectural dimension, and specifically the degree to which interiority is created, maintained, corrupted or degraded. This would mean that the *architectural* action relates to the differentiation of what is within an interior versus what is external, and the *architectural* quality of an object is then the manner in which it forms or augments an interior.

The *architectural* dimension, much like the political, deals with a "constitutive outside". In Mouffe's work this is due to the need for political objectivity to "show traces of the acts of exclusion which govern its constitution", as related to the "constitutive outside" from the work of philosopher Jacques Derrida.[29] This constitutive outside is also easily found in the production of interiority, as an interior is necessarily created in opposition to an exterior. As much as sheltering is an *architectural* concept, it is the creation of an interior which is safe as opposed to an exterior which is unpredictable. As a dimension of interiority, the *architectural* concerns itself more with the details of the boundary and contents of what is interiorized rather than the infinite exteriority which surrounds it. Interiority can be formed in a number of ways, including by the provision of environmental differences (a bus stop with a canopy) or material differentiation (such as some bike lanes). Interiors may contain or be contained within other interiors, which implies a possible reverberation or diminution of multiplied architectural dimensions within any composition of interiority.

For now, we can maintain that the *architectural* has to do with material space. However, this does not actually delimit the potential field of play all that much. Accepting the material scales inherited from new media, the *architectural* does not discriminate against interiors which might be incredibly large (network-scale) or incredibly small (digital-scale). We can also maintain that the architectural has to do with conceptual organizations of the *architectural* as well, as working with an imaginary of the architectural – or a planning of the architectural – should not be excluded. Within these extreme limits can be placed a slew of non-human actors, whether other life forms or machinic organs, and opens up the conversation which decenters the inherited central units of modernism which prioritize the regularity of a homogenized interpretation of human scale. The *architectural* dimension of digital experience should be examinable, in terms of networked spaces and especially those of hybridized spatial perceptions (Mixed Reality).

The unrolling of the *architectural* is not only a mode of producing more of an examinable domain, but also beginning to determine what is not *architectural* within the Architecture. Any quick study of the average Architecture Office might find that a majority of the work within the studio has very little to do with the *architectural* and aligns itself more with the reproduction of ideological social conditions or institutional administration. An initial question would be what part of the labor of the Architect is *architectural* and what is not. The assumption here is that far less than expected.

The *architectural* also changes the conditions for detecting or examining political agency. In response to the pessimism for emancipatory potential, one can immediately perceive the shift when the expectation is no longer isolated to Architecture – to the Architect most specifically – and evaluated as a potential to arise from the full field of the *architectural*. In fact, within the *architectural* there is a possibility for reappraising emergent histories of emancipation that have already taken place along the lines of the barricades, squats, and other moments which institute temporary interiors or challenge the materialized interiors of Architecture. In fact, we begin to realize that most of the *architectural* conditions in the world – as the augmentation, occupation, or destruction of interiors – take place well outside the purview of Architecture.

4. Conclusions

What has been constructed here is nothing final, but rather a working image of low resolution which can be further developed. Pursuing the binary definition of Architecture and the architectural provides the exact distance of analysis that Mouffe creates within political theory. Architecture as a human endeavor to financially and politically manage the organization of the built environment is examinable as such, just as the examination of Democracy, Socialism or Totalitarianism is possible. And the manner of *architectural* actions is separately examinable, which provides a wider understanding of the field of action internal and external to Architecture. As a basic corollary of Mouffe's Politics / political,

we arrive at a workable division: *if Architecture is the ensemble of practices and institutions whose aim is to organize the built environment, the architectural is the ontological dimension of interiorization.*

In terms of Architecture, there are many affectations from this shift, but at least one is identical to Politics. In Agonistics Mouffe writes: "Such a division [friend/enemy] cannot be overcome; it can only be institutionalized in different ways, some more egalitarian than others. According to this approach, radical politics consists in a diversity of moves in a multiplicity of terrains, so as to construct a different hegemony".[30] The presence of Architecture as an institutional set is itself a political question, and one which asks whether this is the egalitarian organization we want as well as which meaningful changes might provide a more robust and representative institution. Or whether the presence of such an institution is required at all. Architecture, as with any form of Politics, is immanently mutable and contingent, even if the fortifications are daunting and robust. This does demand the upturning of Architecture – whether by reform, revolution or abolition – as a political engagement itself. This can concern the treatment of the Architect – rights to pay, etc. – but if that is the limit of its engagement, its effect on the structure remains minimal. The larger impact is that of questioning the central fixtures of Architecture, such as private development, the Architect, or even private property.

As for the *architectural*, the framing of an ontological dimension allows for grounding of an examination not fully dependent on the institutional organizations of Architecture. The interior practices of the squatter, the city planner, the car designer, the blackbird are within the field of this dimension. Instead of searching for the last stand of an autonomous quality, the *architectural* emerges as one quality among many which are simultaneously present. The *architectural* aspect of a thing becomes an indicator which plays along with the political, cultural, and emotional dimensions of a thing instead of attempting to overwrite them. Much like the upkeep of language or meaning, the production, reproduction and destruction of interiors is inevitable. The architectural dimension is constantly negotiated in a full spectrum of scale and importance, and so is something left always undone and ready to be contested or confirmed. And this implies one final connection back to Mouffe: "In order to envisage how to act politically, the moment of decision cannot be avoided, and this implies the establishment of frontiers, the determination of a space of inclusion / exclusion".[31]

Notes
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Biography
Grayson Bailey is an architectural theorist and media researcher with a focus on radical capacities, digital processes, and the discursive limits of architectural production. Their current emphasis is on definitions of Architecture, Colin Ward's "Anti-Architect", and the critique of cybernetic ideology in architectural production. Grayson is a part of the Architekturtheorie department of the Institut für Geschichte und Theorie der Achitektur at Leibniz Universität Hannover and member of the >top Association for the Promotion of Cultural Practice in Berlin.

Atmosphere becomes Atmospher(ic)

Batuk, Aybike[1]; Köknar, Sait Ali[2]
1. Kadir Has University, Interior Architecture and Environmental Design, İstanbul, Turkey, aybike.batuk@khas.edu.tr
2. Berlin International University of Applied Sciences, Interior Architecture/Interior Design, Berlin, Germany, saitali@gmail.com

Abstract

Atmosphere is a polysemic concept that denotes the affective suspension between material and immaterial entities of space. Despite its polysemic richness, the concept has been stuck in architectural phenomenology which is characterized by a strong focus on subjectivity, expressing and reflecting the perception of the specific individual. It has since become a practical tool for architects to create sensational spaces, sometimes limiting the imaginative interpretations. Additionally, it often lacks critical communication, which can lead to the depoliticization of affects.

This research seeks to address these constraints by confining its focus to the scope of spatial representation. It starts by delving into the meteorological and metaphorical layers of the concept. Unpacking and analyzing the semantic affinities reveals that the synonyms of 'atmosphere' can be understood through four analytical axes: [fog, rain cloud, halo, mist, light], [smell, color, taste, aroma, sense], [mood, emotion, aura, dream], and [position, background, ground, location], correspondingly generating 'aerial', 'sensuous', 'ethereal', and 'contextual' qualities. This study aims to explore the potential of intersubjectivity by reimagining 'atmosphere' as 'atmosphere(ic),' essentially examining spatial representation in a more participatory manner. Instrumentalizing atmosphere (a noun) in terms of its adjective derivative, 'the atmospheric,' shifts the focus from qualities to affects. 'Aerial qualities' transform into 'enveloping effects,' 'sensuous qualities' evolve into 'sensational effects,' 'ethereal qualities' shift to 'imaginative effects,' and 'contextual qualities' become 'experiential effects.'

To examine the four-fold atmospheric affects on spatial visual expressions, selected pictorial and architectural imagery are co-analyzed. This analysis also aids in uncovering the atmospheric tactics present in spatial representation practices which are generated through various techniques, tools, and applications. As argued in this paper, the pictorial tactics in question will reveal the outcomes of the atmospheric image-making in creating collective affects.

Keywords: atmosphere, atmospheric, affect, representation, polysemic.

1. Introduction

The concept of atmosphere in architecture has traditionally been associated with conventional forms of phenomenology through subjective experiences and emotions. However, this paper aims to explore its potential as a tool for intersubjective affects in spatial representation. Initially, o gain a comprehensive understanding the multidimensional nature of atmosphere, this paper delves deeper into the meteorological and metaphorical layers of atmosphere. Four axes emerges from a systematic analysis of its semantic affinities through its synonyms: [mood, emotion, aura, dream], [smell, color, taste, aroma, sense], [position, background, ground, location], and [fog, rain cloud, halo, mist, light]. By examining the semantic affinities of atmosphere through these axes, we can uncover these multidimensional aspects, namely 'ethereal', 'sensuous', 'contextual', and 'aerial' qualities.

When it comes to representing the qualities of atmosphere, one can easily end up trying to encapsulate the entire qualities atmosphere as a full image or projecting one's highly subjective experience onto it. Portraying atmosphere as a finished image that solely mirrors one's emotional state, could limit diverse interpretations. However, a pressing question arises: can atmosphere uphold its imaginative essence within the practices of spatial representation? Reimagining 'atmosphere' as 'atmosphere(ic)' can shift the focus from qualities to affects, emphasizing the atmospheric impact on individuals. Considering 'atmospheric' as an operational tool involves creating open atmospheres that encourage active engagement and interconnectedness among individuals. This fosters an imagery where diverse imaginations can intertwine. Rather than conveying a particular subjective emotion, generating an intersubjective affects to preserve this openness be a viable suggestion.

To comprehend the proposed transition from subjective emotions to intersubjective affects, exploring the concept of affect through its connection with the atmosphere is necessary. Massumi eloquently describes atmospheres as 'inter-subjective intensities' that emerge through the interplay between bodies, expressions, and practices[1]. An 'affect' signifies an experience of intensity that operates outside of conscious awareness; it embodies a juncture of latent and unorganized capacity[2]. Ben Anderson builds upon this notion and re-conceptualize atmosphere as 'collective affects' that arise and dissolve concurrently[3]. Drawing from Anderson's terminology of "collective affects," this inquiry delves into the formation of intersubjective expressions and their potential inherent in atmospheric representations. In doing so, it becomes evident that the relational and intersubjective essence of the atmosphere is deeply intertwined with the realm of affective experiences. Selected spatial representation examples constitute an appropriate field for capturing the enveloping, imaginative, experiential, and sensational affects of atmosphere. They serve as a means to uncover atmospheric representation tactics and their impact on collective affects.

2. Polysemy of Atmosphere: A Four Fold Approach

The concept of atmosphere originally referred to the upper gas layer surrounding the Earth and other celestial bodies in the 17th century. Later, in the 18th century, it was used metaphorically to denote "a certain mood hanging in the air"[4]. Today, it is defined as the environment or ambiance in which one lives and is affected. Even from this brief inquiry, it is evident that the atmosphere is a polysemic concept encompassing semantically intertwined dimensions. Delving into synonyms highlights that atmosphere is rooted in and extends to other related notions.

To comprehensively analyze the various dimensions of the 'atmosphere' concept, a compilation of "synonyms and similar words" was assembled using Merriam-Webster's thesaurus[5]. Upon examining these words, it appears that specific synonyms exhibit significant semantic and contextual affinities. Certain terms directly tap into the meteorological connotations associated with 'atmosphere' (e.g., light, gas, fog, nimbus), while others are more closely linked to sensory attributes we directly perceive (e.g., color, scent, taste). Additionally, some terms are linked to immaterial qualities tied to emotions (e.g., soul, character, mood). Furthermore, a subset of terms is found to primarily evoke specific locations and contextual references (e.g., place, location). These resemblances serve as starting points for intuitively grouping synonymous terms, allowing overarching themes to emerge and provide a framework for nuanced exploration of the concept.

The overarching headings can be referred as atmosphere-making qualities. Ultimately, the semantics of the term can be understood with the help of four analytical axes, namely 'aerial' 'sensuous,' 'contextual,' and 'etherial' qualities of atmosphere (Fig. 1). These categorical attributes are interwoven and porous, allowing for transitions. Common synonyms contributing to this interchangeability, such as air, sense, spirit, and context, shape the fundamental terms that define the characteristic structure of the concept. The identified and categorized qualities create a framework for examining the constituent elements of 'atmosphere.'
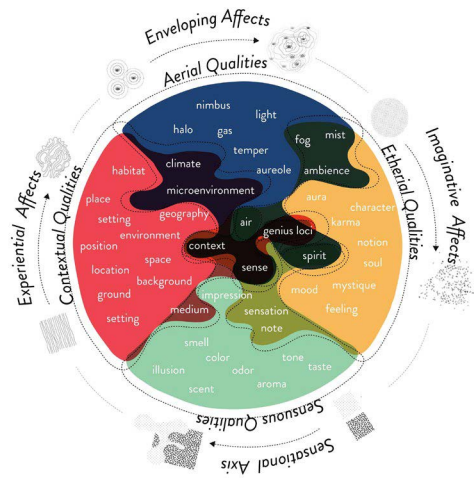
Fig. 1

3. Atmosphere to Atmospher(ic) : Qualities to Affects

There is a common tendency to capture the atmosphere as a single, complete image, disregarding its inherently abstract nature that cannot be fully depicted. Recognizing the impossibility, atmosphere can only be represented through a subjective filter. However, if this subjective approach that states a specific form of experience can exclude the other individuals experiencing the medium. Gernot Böhme addresses the concept of atmosphere from an aesthetic perspective, emphasizing the "quasi-objective and intersubjective" aspects of the concept that indicate spatial and intersubjective affective dimensions[6]. Atmosphere is not only between space and the body experiencing it but also in conjunction with the modes of transmission between bodies, objects, and spaces. In line with this idea, this study embraces the intersubjective nature of atmosphere, especially within the context of spatial representation where communication through images holds a significant importance.

As Brian Massumi examine atmospheres as 'inter-subjective intensities'[7], those intensities are the forces of subjects infolded into another[8]. According to Ben Anderson, these intensities are precipitately labeled in emotions, even though atmosphere is a distinctive concept blurs the border between affect and emotion. Atmosphere can possess impersonal qualities while also being intensely personal[9]. The main difference between them is that while emotion is highly related to subjective experience, affect is a state before any formed of emotion; it is more raw and operable[10]. Owing to its inherent openness and formlessness, affect can be communicated between bodies. Therefore, to achieve an intersubjective communication through atmospheric representation, it would be appropriate to focus on the concept of "affect", rather than the individual interpretations such as a 'feeling' or 'emotion.

Drawing from Deleuze's thoughts on affect, which explore that intensities transcend the individual through their dynamic qualities, Ben Anderson builds upon this notion and re-conceptualize atmosphere as 'collective affects,' as "occurring beyond, around, and alongside the formation of subjectivity"[11]. Anderson's terminology of "collective affects," helps us to understand the value of intersubjectivity in spatial representations. Collective affects in representation opens up a communicative space rather than conveying a direct message. This communication generated through transmission between individuals and the environment, where there is already no secure distinction between them[12]. Therefore, to generate collective affects through the imagery of atmosphere, it is necessary to utilize the concept. Instead of 'atmosphere' as a noun, we should embrace its adjective derivative, 'atmospheric,' to shift the focus from atmosphere to atmospheric making. Since the idea of capturing the 'atmosphere' as a complete single image is a futile endeavor, embracing the 'atmospheric' means creating and treating it as a tool.

By hypothetically shifting from 'atmosphere' to 'atmospheric,' focus shifts from atmosphere's qualities to its intersubjective affects, namely 'collective affects." To capture how those affects are crafted in spatial representations; four-fold qualities are examined with the collective affects they might correspond to.

The following four sections delve into specific aspects of atmospheric affects. The first section focuses on the 'enveloping affects' of 'aerial qualities' in the atmosphere, highlighting the potential of formlessness. The second section explores the sensational effects of 'sensuous qualities' and the importance of enhancing non-visual sensory experiences through highlighted haptic expressions. The third section emphasizes the 'imaginative affects' of 'ethereal qualities' in atmospheric imagery, highlighting the fragmented nature of the atmosphere and enabling open interpretations. Finally, the fourth section concentrates on the 'experiential effects' of 'contextual qualities' of the atmosphere, illustrating the opportunities for interconnecting different scales in atmospheric imagery.**3.1. Aerial Qualities to Enveloping Affects**

Atmospheric experience, which combines all sensory perceptions, a particular smell, sound, or predominant tactile input, can evoke an immersive affective response. 'Air' which is situated at the intersection of meteorological and metaphorical axes within the semantic fields of atmosphere, is a phenomenon that originates from a specific cosmological domain that directly affects the dynamics of perception[13]. The enveloping affects can be attributed to the aerial properties of the atmosphere, such as [light, fog, air, mist, and cloud]. Conversely, when it comes to experiencing the aerial atmosphere through an image, how can air's formless and temporal qualities guide the immersive intersubjective affective state? To delve into this question, the visual portrayal of clouds, which hold a significant position in the meteorological dialogue of the atmosphere, can offer a glimpse into the possibilities of atmospheric elements in the encounter with architectural representation.

The journey into the realm of cloud imagination unveils a duality. On one hand, the cloud is an expression of sublimity, an entity that surpasses human perception creating an illusion of an ideal. As in the earlier periods clouds in visual culture were present as a sign or symbol of infinity and openness in depictions, complementing the image or as just a pictorial accessory[14]. On the other hand, the cloud has an inherent quality of experience, ever-changing, formless, and imaginative. Especially in 19th-century Europe, the interest in the sky and atmospheric events rapidly increased. Modern painters enchanted by the charm of clouds, started to focus on reflections, filters and blurs.The cloud, the most ambiguous element of nature in terms of its formlessness and temporality, considered as a phenomenon that could not be included without systemized in the rationalized world. As Damisch stated, this crisis was the consequence of assigning perspective space as the primary space of representation, and its dominant role in representation; and 'the line' was inadequate for representing surfaceless and formless cloud objects[15].

Alexander Cozens, the painter was a figure who stands between this duality, embracing the formlessness of atmospheric qualities without trying to impose a delineated form upon them and discovering unique atmospheric tactics within that context. His "blot drawings" proposed a composition for volatile images by ink and paint stains (Fig. 2). According to Cozens, lines can depict ideas, while stains work as tools of thought; stains generate raw forms instead of directly representing the visible, generating open images that allow for mental variation[16]. In relation, hatching is another way of embracing ambiguity; as it allows for free intersections and generate open-ended imagery[17]. For Cozens, contouring was a tool for expressing ideas, while staining is the tool for dynamically invoking them in the mind to reveal an enveloping experience.
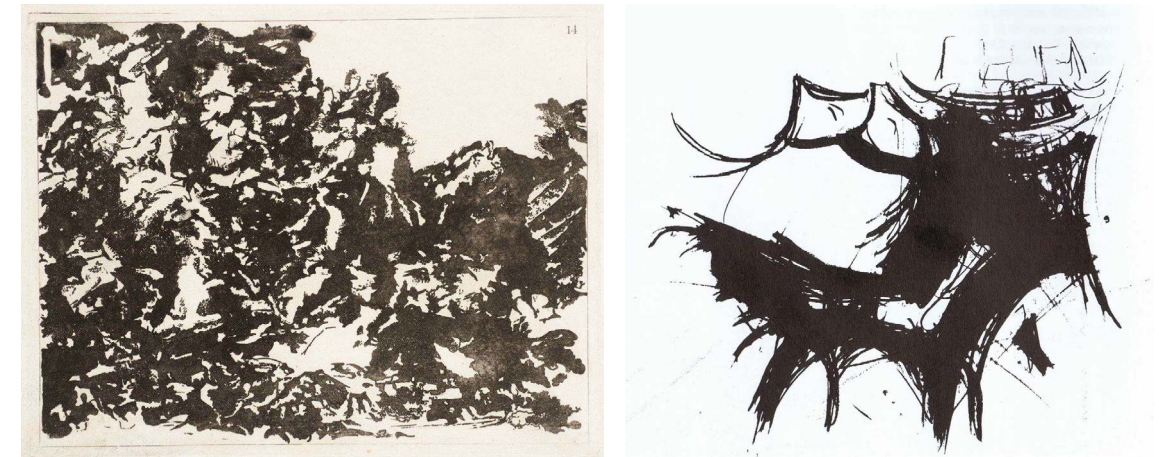
Fig. 2

Similar to Cozen's thoughts on the blots and forms; Reima Pietilä as an architect broadens the definition of form. His drawings are "thought-forms"[18]. His blotting techniques evoke atmospheric elements that eventually transform into structures. Pietilä takes natural forces as integral components. Deleuze explains affect through forces, which are prerequisites for affect, but affect is a formation beyond the forces that constitute it[19]. In Pietilä's imagery, those forces participate through gestures. As seen in the sketch of the Kaleva Church, Pietilä's concave lines transform into a juxtaposition of concave concrete blocks side by side, creating gaps that allow light to flow in, evoking the experience of light filtering through the trees (Fig. 2). Pietilä's sketches are made up of dozens of sketch papers placed on top of each other. Pietilä begins by drawing searching lines, then adds another sketch paper on top of it. While he follows the traces visible on the underlying drawing layer and continues his search. After a while, lines turn into blots, and these blots create possibilities of forms. Blots shows the exploration process and potentials and possibilities of forms. Inconclusive character oh his blots leave room for interpretations owing to the obscurity of what they are leading to[20]. His gestures are his tactics, constituting communication through motion and abstraction; the "experience of experience"[21].

In brief, pictorial tactics for depicting the 'formless' provide an opportunity to delve into the potential of atmospheric imagination by bridging material and immaterial, measurable and immeasurable and dynamic and static. This pictorial gestures has the potential to inspire architects to carry the enveloping affect of the aerial qualities of atmosphere to the realm of spatial representation.

3.2. Sensuous Qualities to Sensational Affects

Sensuous qualities of atmosphere such as [scent, color, taste, aroma] has direct impact on the body, creating the sensational affects on individuals. Merleau-Ponty emphasizes the relationality and integrality of sensory experience as follows: "My perception is not a sum of visual, tactile, and audible givens. I perceive in a total way with my whole being I grasp a unique structure of the thing, a unique way of being, which speaks to all my senses at once"[22]. It is a synesthetic[23] experience in which multiple senses blend to create a unified whole. Atmosphere is not a collection of separable and controllable material and immaterial elements. Whereas those elements exhibit unforeseen performances, and inconsistencies occur in their interactions. In parallel, Bille and Sorensen argue that architecture's inability to fully control its own materiality comes from the fact that the components of atmosphere are not isolated entities[24]. In fact, certain sensory elements can suppress others or awaken entirely different senses during an interaction. Therefore, the more sensuous qualities activate the senses dissolve into each other, the more they multiply the atmospheric affects. In this context, synesthesia can be redefined as a phenomenon that can help us to think beyond the categorical perceptual systems by multiplying sensational affects.

In the realm of spatial representation, unlike real-life sensory experiences, synesthetic experiences are primarily perceived through the sense of sight. For visual images to enhance synesthetic experiences, atmospheric qualities must blur the boundaries of the senses. This dissolution reveals unique perceptual forms without dictating a specific mode of perception, blurring the world experience.

The practices of Mark West, who is not only an architect and builder but also an artist, provide a compelling example of the coalescence of sensuous elements. In his casting works, where he pours concrete into lightweight, flexible molds like sheets of fabric, he transcends the conventional approach to concrete's brutal materiality, transforming it into a profoundly sensual substance. Furthermore, he successfully translates his poetic cross-sensory practice into his visual narratives. His drawings, where the familiar and physical combine with the surprising and ambiguous, result in synesthetic transitions. He assembles sharp forms of structures with haptic textures. He also describes his works in a synesthetic manner, stating "These hot stories came with a particular technical flavor that was enriched by the times and rolled and lingered on our tongues[25]".
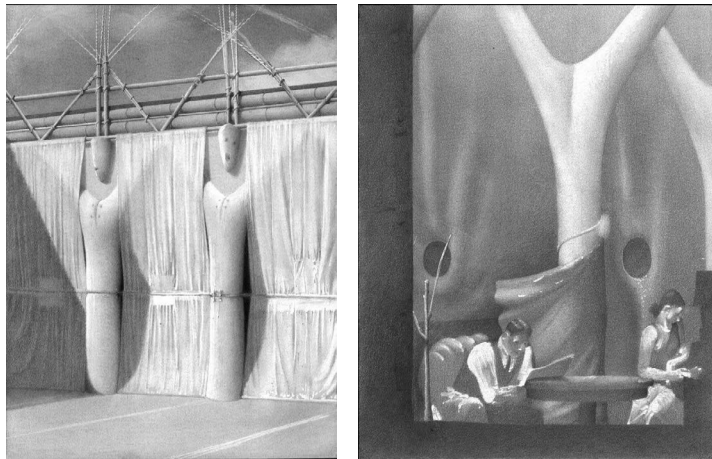
Fig. 3

In one of his architectural fictions[26], 'Hotel Edward Hopper,' Mark West includes graphite drawings of recreated figures from the artist Edward Hopper within spaces composed of his fabric-formed concrete elements (Fig. 3). In this context, the space itself is highly tactile, conveying the atmosphere through its tactile qualities. Tactility is a sensory aspect that physically integrates the experience between the body and the world, situating both the body and our minds within the space we occupy. The tactile elements within this pictorial space directly influence and diversify perception, creating an additional sensory dimension. When he describes this atmosphere, he says "I imagine the pleasures of the place to be inextricably linked to air, light and the material world, but emphatically not those of the infantilizing 'spa'"[27]. He can mean that this sensational atmosphere is not pacifying; on the contrary, it offers a kind of experience full of collective affects. As he adds, "the prospects for pleasure here are not offered in self-centred promises, but in the sad beauty of the way the world is"[28]. The suspended

atmosphere he describes is also a way of not dictating any particular experience but instead creating a shared affective space. In conclusion, by embracing synesthesia in sensory experiences, we recognize that the boundaries between our senses are not fixed and can coalesce and intermingle in ways that create new perceptual possibilities.

3.3. Etherial Qualities to Imaginative Affects

The imaginative affects are attributed to the ethereal qualities that include the intangible properties of the atmosphere, such as [character, soul, notion, and feeling]. These ethereal qualities, facilitated by the openness they encourage, play a significant role in eliciting imaginative responses. Anderson suggests that affective atmospheres possess an ongoing, incomplete nature; they are continuously emerging and vanishing[29].

The mind, as a creator of its own reality, cannot isolate what the eyes see but synthesizes it with the other senses in a synesthetic interplay of perception, where each sense accompanies and enriches the others. In this realm, hidden or veiled sensations emerge through triggering stimuli. Consequently, atmospheric perception fills the gaps within its domain. Merleau-Ponty explains that "The eye sees the world, and what it would need to be a painting, sees what keeps a painting from being itself, sees—on the palette—the colors awaited by the painting, and sees, once it is done, the painting that answers to all these inadequacies just as it sees the paintings of others as other answers to other inadequacies[30]." Here, in parallel with Merleau-Ponty's words, in affective image-making, the visible does not oppose the invisible; these concepts intertwine and coexist. The incomplete essence of the atmosphere opens up imaginative possibilities.

In architect and painter William Alsop's works, a combination of emptiness and fullness is evident. He often prioritizes atmospheric qualities over structural characteristics in his design process. His design process includes abstract studies on canvases, which he describes as "a series of stains and brushstrokes[31](Fig. 4)." Alsop also highlights the significance of working with accident-prone tools, creating a space for uncontrolled experimentation that brings a form of participation. This allows for imaginative engagement where the observer traverses through these gaps, rather than generating closed meanings. Regarding this kind of openness, Umberto Eco presents it as a primary question of creative practices for authors embracing their work as unfinished and open to change and alteration[32]. Fragmenting and dispersing the image within the pictorial plane and creating blank spaces can be an atmospheric design strategy since they stimulate the imagination.
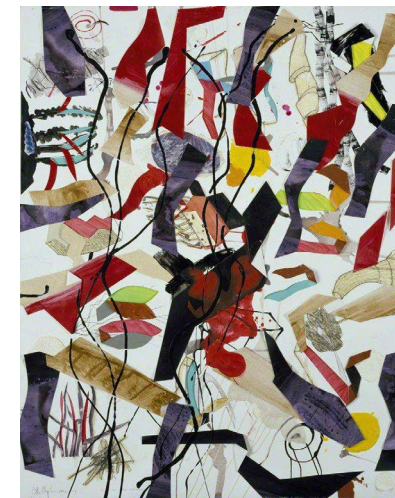
Fig. 4

3.4. Contextual Qualities to Experiential Affects

As identified in the synonym map, the terms [position, environment, ground, location, habitat, background, setting, context], highlight the experiential qualities leads to contextual affects. These atmospheric qualities can be understood by considering the interplay of time, space, and experience. Awareness of this direct correlation between spatial representation and the contextual attributes of the atmosphere helps in representing the constitutive layers of experience without imposing a hierarchical structure between them. This perspective embraces a conducive and transparent form of communication, rather than depicting an 'ideal' image of the world that conceals the complexities and messiness of life; seeks to preserve the richness of the atmosphere by embracing the polyphony of life.

The architectural design process itself has a dynamic rhythm by oscillating between different scales, including fluctuations, leaps, and reversals[33]. Building upon this notion, a dialogue in which the inputs of different scales in spatial representation remain interconnected is a powerful tactic for conveying

experience rhythms. Architectural group Fala's collage works can be considered excellent examples of embracing the richness of daily life qualities in creating experiential affects through the application of a non-hierarchical visual language between the experiential and the tectonic. In their collage works, even the minutest everyday objects engage in a dialogue with structural elements, portraying everyday life as both a means of comprehending space and a reflection of lived experience. Their narrative style adopts hybridity that is attuned to the multifaceted nature of human experience, rather than attempting to present a sanitized version of life in spatial representation. This approach results in imperfect, fragmented, and incomplete impressions that prioritize transparency and authenticity in communication, ultimately creating collective affects through daily life experience (Fig. 5).

Fig. 5

4. Conclusion

Atmosphere is a multi-layered spatial metaphor enabling affective communication in spatial representation. It has a particular aspect of facilitating intersubjective affections. Therefore, to achieve an intersubjective communication through atmospheric representation, the research focuses on the concept of "affect", rather than the individual interpretations such as a 'feeling' or 'emotion. If affect is understood as a merely subjective perception by its characteristic of ambiguity, it becomes a device for architects to generate positive feelings exclusively within the privileged human subject by isolating them from diverse network relationships. Frichot explains this soothing understanding of affect is intertwined with conservative forms of architectural phenomenology[34]. Richards also agrees that affect particularly in this context, has directed its potential toward the search for a comfortable "pleasant little corner[35]." In the 21st century, there has been an increase in the prominence of affect and emotion-driven tendencies in social and political discourses. This shift directed affect towards effects generated by predetermined emotions as controlled effects on subjects all concealed under the mask of affect.

Anderson's terminology of "collective affects," helps us to understand the value of intersubjectivity in spatial representations since rather than conveying a direct message it opens up a communicative space. Therefore, to generate collective affects through the imagery of atmosphere, it was necessary to utilize the concept. Instead of 'atmosphere' as a noun, embracing its adjective derivative, 'atmospheric,' shifts the focus from atmosphere to atmospheric making. To capture how those affects are crafted in spatial representations; four-fold qualities are examined with the collective affects they might correspond to. Four sections of the Atmosphere to Atmospher(ic) : Qualities to Affects chapter delve into specific aspects of atmospheric affects. The first section focuses on the 'enveloping affects' of 'aerial qualities' in the atmosphere, highlighting the potential of formlessness. The second section explores the sensational effects of 'sensuous qualities' and the importance of enhancing non-visual sensory experiences through highlighted haptic expressions. The third section emphasizes the 'imaginative affects' of 'ethereal qualities' in atmospheric imagery, highlighting the fragmented nature of the atmosphere and enabling open interpretations. Finally, the fourth section concentrates on the 'experiential effects' of 'contextual qualities' of the atmosphere, focusing the interconnecting different scales in atmospheric imagery. This examination reveals pictorial tactics of the atmospheric image-making on creating collective affects. Instead of conventional means in spatial representation, which primarily adopts a photorealist approach, atmospheric making involves distorting forms, emphasizing, and incorporating sensuous elements, and disrupting perspective and hierarchical drawing principles by applying pictorial tactics such as blurring, filtering, staining, hatching, dispersing and merging thus opens the image to the imaginative participation.

Notes

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5. *Merriam-Webster.com Online*, s.v. "Atmosphere," accessed May 5, 2019. https://www.merriam-webster.com/thesaurus/atmosphere
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7. Massumi, *Parables for the Virtual: Movement, Affect, Sensation*
8. Eric Shouse. "Feeling, Emotion, Affect"
9. Ben Anderson, "Affective Atmospheres"
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11. Ben Anderson, "Affective Atmospheres", 77.
12. Brennan, Teresa. *The Transmission of Affect.* (Ithaca: Cornell U. P., 2004)
13. Jonathan Hill, *Weather Architecture* (Routledge, 2013)
14. Hubert Damisch, *A Theory of/cloud: Toward a History of Painting* (Stanford: Stanford University Press, 2002)
15. Damish, *A Theory of/cloud: Toward a History of Painting* See also. Luke Howard, *Essay on the Modifications of Clouds*. (Cambridge: Cambridge University Press, 2011)
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18. Wiszniewski, Dorian. "Reima Pietilä and Gesture in Research-by-Design: The Finnish Embassy in New Delhi, 1962–1982." *NA* 30, no. 3 (2019): 29-56
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20. Dorian Wiszniewski. "Reima Pietilä and Gesture in Research-by-Design: The Finnish Embassy in New Delhi, 1962–1982."
21. Dorian Wiszniewski. "Reima Pietilä and Gesture in Research-by-Design: The Finnish Embassy in New Delhi, 1962–1982.", 44
22. Maurice Merleau-Ponty. "The film and the new psychology," in Sense and Non-Sense, Translated by Hubert L. Dreyfus and Patricia Allen Dreyfus, (Evanston: Northwestern University Press, 1964), 50
23. Synesthesia is a neurological phenomenon that means joined/coupled sensations means direct cross-over between senses, resulting in sensory reactions by stimulating one sensory mode. While synesthetic perceptions are innate in every person, their intensity, scale, and modes vary from person to person. See: Ramachandran, V. S., & Hubbard, E. M. "The Phenomenology of Synaesthesia," *Journal of Consciousness Studies 10*, no. 8 (2003): 49-57. Similarly, Richard E. Cytowic notes that every mind develops unique cross-sensory relationships by selecting and processing elements from the atmosphere. See: Richard E. Cytowic, *Synesthesia: A union of the senses*. (MIT press, 2002) Synesthesia is a multidimensional spectrum; on one end, there are extreme sensory crossovers in the brain, while on the other end, there are more common perceptual associations as synesthetic expressions that open an intersubjective communication. Ramachandran describes this ability as "cross-modal synesthetic abstraction" and interprets synesthesia as the central trigger for metaphorical thinking. See: Ramachandran and Hubbard, "The phenomenology of Synaesthesia" For example, high tones are represented by adjectives such as small, sharp, and bright, while low tones are conveyed with expressions like voluminous, and low. A synesthetic person can see colors and shapes simultaneously in response to the sound of a note and can also experience specific tastes associated with certain colors.
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25. Mark West, "Out of our hands: Three architectural fantasies for strange and sad ecologies," *Design Ecologies 2,* no. 2 (2012): 214
26. For Mark West's Architectural Fictions, See: https://www.survivinglogic.ca/architectural-fictions.html
27. Mark West, "Out of our hands: Three architectural fantasies for strange and sad ecologies", 228
28. Mark West, "Out of our hands: Three architectural fantasies for strange and sad ecologies", 228
29. Ben Anderson, "Affective Atmospheres"
30. Maurice Merleau-Ponty, "Eye and Mind". in *The Primacy of Perception: And other essays on phenomenological psychology, the philosophy of art, history, and politics*, (Northwestern University Press, 1964), 159.
31. Tom Porter, *Will Alsop: The Noise* (Routledge, 2010)
32. Umberto Eco, *The Open Work* (Harvard University Press, 1989)
33. Albena Yaneva, "Scaling up and down: Extraction trials in architectural design," *Social Studies of Science 35*, no. 6 (2005): 867-894.
34. Hélène Frichot, "Infrastructural affects: Challenging the autonomy of architecture," in Architectural Affects After Deleuze and Guattari, ed. Marko Jobst and Hélène Frichot (Routledge, 2020), 22
35. Kieran Richards, "Deleuze, Guattari, and the non-subjectified affects of architecture," in *Architectural Affects After Deleuze and Guattari*, ed. Marko Jobst and Hélène Frichot (Routledge, 2020), 119

Image Captions

Fig. 1. Synonyms Map. Author's figure
Fig. 2. Left. Plate 14, Alexander Cozens, 1785, © Creative Commons CC-BY-NC-ND (3.0). Right. Kaleva Church Sketch, Reima Pietilä, 1959-66, © Creative Commons.
Fig. 3. Left. Hotel Edward Hopper_Graphite on Paper, Mark West, 2007, © Mark West Right. Hotel Edward Hopper Graphite on Paper, Mark West, 2007, © Mark West.
Fig. 4. Fog is an Urban Experience, Will Alsop, 2007, © Royal Academy of Arts Photo credit: Royal Academy of Arts
Fig. 5. Uneven House, fala, 2018-19 © fala

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Biography

Aybike Batuk was born in Istanbul. She studied architecture at Istanbul Technical University. She completed her Master's Degree in Architectural Design program in the same institution where she is also currently a Ph.D. candidate. In her master thesis she focused on post-digital drawings through atmospheric narratives. In her Ph.D., she is conducting her thesis on affective materiality. She works as a research assistant at the Faculty of Art and Design at Kadir Has University Istanbul since 2017. She has been actively involved in tutoring in 'Visual Communication' and 'Basic Design in Architecture' studios.

Sait Ali Köknar was born in Istanbul. He studied architecture at Istanbul Technical University (ITU, 1996). After completing his master's thesis in the building technology program (M.Sc.,2001), he received his doctorate in architectural design from the same University (Ph.D., 2010). He visited Bartlett, UCL, for a post-doc study in 2010. During his graduate studies, he worked in prominent architectural and interior design offices in Istanbul and participated in architectural design competitions. He joined ITU Faculty of Architecture in 2001 and moderated design studios until 2018. He coordinated first-year design studios, and lectured on contemporary architecture at the Faculty of Art and Design at Kadir Has University Istanbul, between 2018-2021. Parallel to his teaching practice and research on design studio pedagogies, he extensively collaborated with cultural institutions and artists. He participated in projects exhibited at the Istanbul, Rotterdam, and Venice Architecture Biennials. He has curated several popular exhibitions and events. He is lecturing and moderating interior design studios in BI since 2021.

Human Scale
The Vicissitudes of the Standard

Bissett, Tara
University of Waterloo, Faculty of Architecture, Cambridge, Canada, tmbissett@uwaterloo.ca

Abstract

We inhabit a world of norms that are set out by standards. Throughout history, as the term "standard" encountered new disciplines, it began to be defined by and moored to the spectrum of the human body. Significant in architectural discourses, the term *standard* fomented in other disciplines and contexts. In 19th century biology, Francis Galton framed the body as a standard with a serial number in fingerprinting. In statistics, the standard was linked with the concept of "average". Mathematician Adolphe Quetelet laid out a series of universal laws underlying anatomy. These led to the development of the idea of the "average man" which shaped the built modern world for normate bodies.

In the twentieth century, the standard body was the unit of measure determining logistical procedures, which in turn culminated in designs for kitchens and workplaces. Meanwhile, modern architects, Ernst May, Walter Gropius, Le Corbusier, and Frederick L. Ackerman established that the development of standards would allow for the most expansive social change with the least economic investment. *Existenzminimum* emerged as a concept aligning the standard with the bare minimum, a conceptual unit driving social housing.

This paper traces the semantic development of the term "standard" from its origin as a physical tool through to its relationship with the human body and the formation of averages and the concept of "bare minimum". Ending in the history of Universal Design, the paper demonstrates the uneasy dialectical relationship between the use of the standard as an ideological tool for social change and as a rigid device that contributes to a code-compliant process of design.

Key words: standard, normate template, existenzminimun, average, Universal Design.

We inhabit a world of norms that are set by standards. Variations of the word standard emerged in European languages in the 15th century to designate instruments for measuring space and time—the flag and a carpenter's square—cementing the imbrication of the term with temporal and/or spatial experience. Although its original meaning denotes a concrete measurement, the standard's entry into practice with new technology and economic systems radically inflected its meaning. Operating in a world of vicissitudes, the standard invokes facticity through its interrelationship with statistics, mathematics, and legislation and is often classified as a benign technical specification. Standards, however, are produced within social, historical, and political contexts and are unambiguously instrumental in determining normative bodies, spaces and ways of being in the built world.

The role of the standard and standardization has been deeply explored in architectural history and theory. Le Corbusier introduced the Modulor system as a framework of standards for the modern manufacturing process. [1] Sigfried Giedion analyzed the role of the standard in mechanization, particularly in the wake of the industrial revolution.[2] Mario Carpo has examined how standards and standardization evolve from new technologies and how they impact architectural design. More recently, Carpo has shifted these discourses to the non-standard paradigm arising from digital design and production.[3] It is however the primary intent of this paper to trace the human spectrum of the standard: in dialog with the human body how does the standard function in a double bind to both protect and to undermine the human body? What are the tools of anthropometric metrics, process charts, and checklists that have facilitated this? The scholars who have shaped the intersecting discourses of architecture and disability studies—Aimi Hamraie, Rosemarie Garland-Thompson, Jos Boys, David Gissen, and Ronald Mace—have demonstrated that beginning the process of design from the vantage point of human difference and diversity engenders non-standardized bases for design practice; it is within this spirit that I have analyzed and confronted the standard.[4] Bodies of difference, those that come up against the built world and meet thresholds, slopes, and geometries in unintended ways, challenge the procedure of standards. From this perspective, standards often fall short of fulfilling their intended purpose.

1. Architectural Epistemologies of the Ideal Body

Architectural discourse has long been shaped by the concept of the "ideal" body. Vitruvius laid out the groundwork for a system of ideal proportions, generated from the human body. As a mensuration system, his schema illustrates how the discrete members of the ideal body are commensurate with a given whole, depicting rationality, proportion, beauty, and symmetry. Leonardo DaVinci famously illustrated Vitruvius' proportional system in his Vitruvian Man drawings, showing a man standing in two positions superimposed, with arms and legs stretched to the perimeter of the circle and square within which it is circumscribed. Also idealized, the human body is directly implicated in the geometrical process of design, and likely, divine human form, offering a system for assemblage at a time when architects were grappling with new modalities in ornamentation and construction.
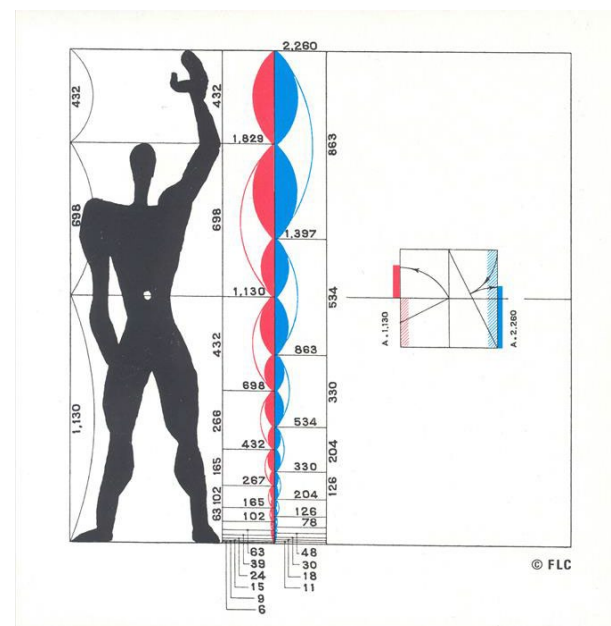
Fig. 1

Le Corbusier's Modulor Man is one of the best-known proportional systems of the modern era, in part due to its representation on the base of the Unité Habitation housing complex in Marseille. Codified in

1945, Le Corbusier geared his Modulor system to the modern manufacturing industry. Again, the ideal male figure with a raised arm dominates the proportional system. Le Corbusier writes that these proportions, "drawn on the wall or made of strip iron, which will serve as a rule for the whole project […] the mason, the carpenter, the joiner will consult it whenever they have to choose the measures for their work; and all the things they make, different and varied as they are, will be united in harmony" (Fig. 1)[5] The system demonstrates how constitutive parts of mass produced building elements comprise an artful whole, by assigning a mathematical scaffold inspired by the golden section, to which all modular units conform. Le Corbusier's Modulor Man stands 1.83 metres tall, measurements derived in part from an idealized protagonist (specifically from British detective novels) rising 6 feet in height, a measure that also synthesized metric and imperial systems.[6] While these proportional systems perpetuate the idea of an ideal human form as a standing, able-bodied, and European male, they did not consider bodies of difference—women, disabled people, varied ethnicities, etc. Yet, the concept of the "average" person would have greater impact on the procedure of normative operations in design.

2. The Average Body and Normative Spatial Standards

Since the 16th century, the two ideas of the norm and the standard have been etymologically linked, beginning with the carpenter's square, originally named the "norm". In the 19th century, when the notion of the "average human" emerged, the idea of the "standard" was central to its formulation. Charles Darwin's half-cousin Francis Galton worked directly with the concept of the standard, developing a process for standardizing human bodies with the invention of fingerprinting, a matrix that signaled simultaneously the commonality and individuality of all human bodies as a universal imprint. Nonetheless, he felt obligated to qualify the concept of the "average human" as generally inferior, establishing a ranked spectrum of human character determined by a mass of mediocrity at its centre; the farther you were from the central marker of the average mass in the middle, the more exceptional you were.[7] In those years, however, the "average" gained value in another context. Galton's contemporary, the French mathematician Adolphe Quetelet would closely correlate the concepts "average", "norm", and "standard" by inventing statistics. Quetelet articulated a series of universal laws and data sets underlying the anatomical proportion of the average man. These figures led to the development of the Gaussian or bell curve, which centred the average man as the driver of design for everyday life.[8] This prototype would ultimately shape the built modern world for a normate body template by determining the ergonomics of everything from bikes to locomotives to chairs and, later, fighter jets.

Fig. 2

The concept of the average human body was central to the burgeoning industrial revolution, which not only required standard parts to facilitate the labour process, but also needed those same bodies to "fit" the systems, machines, elements, and furniture that it mass produced. Industrial mass production relied on a complex and expensive matrix, a prototype that lay the blueprint for identical copies. Unsurprisingly, the science of measuring the human body, anthropometry, arose at this time, as documented in

Alphonse Bertillon's instruction manual, *Identification anthropométrique* (Fig.2). He does not conceive the human body as a system of parts proportionally embedded within a poetic whole, but rather interpreted bodies as groupings of functional units defined by chart and graph systems. As a corpus of scientific organization, the human body was concretely linked not only to the built world, but also to its systems of measurements and tools used for measuring it.[9] As a result, a feedback loop between the built world and the normate body template emerged, whereby certain spaces, technologies, and engineered objects were designed for a perfect fit with "average" bodies. The misfit body, in turn, was produced by design.[10]

3. The One Best Way: Rapidity, Time, and the Facilitation of Operations
Formulating the human body in terms of the average or standard, instead of the ideal, enabled it to become a modular component in efficient systems design and workflow production. Contemporaries of Frederick Taylor, Frank and Lillian Gilbreth closed the gap between the body, surrounding space, and elements of the built environment. When Frank Gilbreth wrote *Bricklaying System,* a book that proposes the most efficient process for laying bricks, he argued that speed was one of the most valuable qualities in labour production. Mandating that workers master efficiency before quality, he developed procedures to facilitate a network linking bodies, gestures, and the built world. By isolating all the necessary individual movements as standard modular elements within the process of labour, he showed how labourers could reduce their movements in laying a brick to four simple gestures.[11]

3.1 The Process Chart and Routing Diagram
If the scientific chart was the tool of choice for anthropometry, the process chart and the diagrammatic routing plan were the most effective ways to log and standardize embodied movement.[12] As rubrics, they offered a visual snapshot of the precise relationship between the body in motion and the task at hand. Lillian Gilbreth was interested in reducing wasted energy, effort, and movement, particularly in domestic labour, by plotting the "one best way."[13] This process required a "standardized" human, who as she put it "was the ideal man to observe and with whom to obtain the best Motion Study and Time Study data. He is the fastest worker, working under the direction of the man best informed in the particular trade as to the motions of best present practice, and being timed by a Time Study Expert."[14]
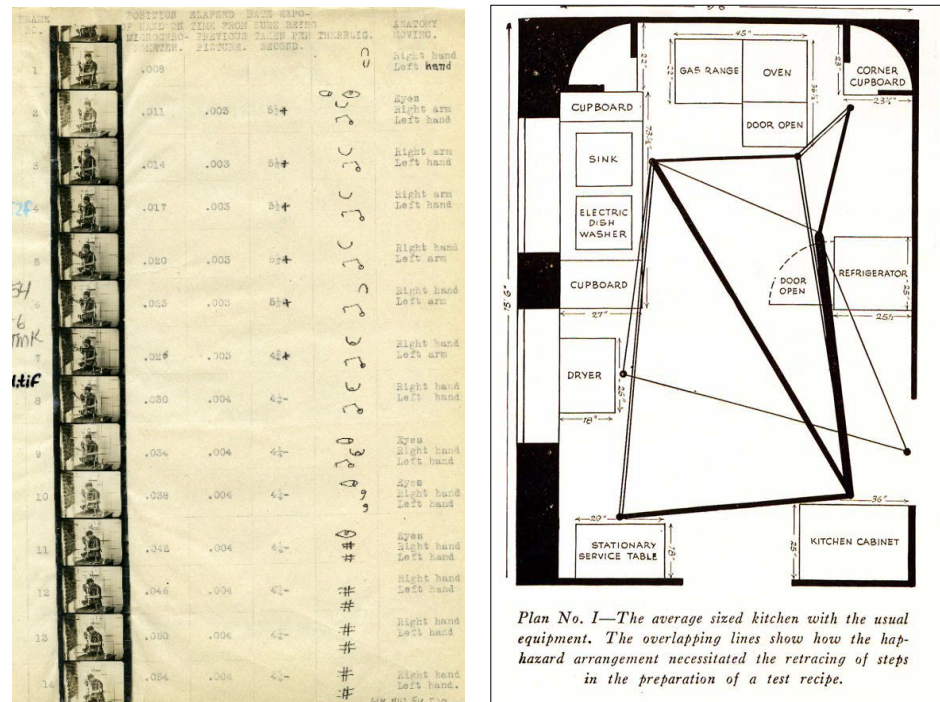
Fig. 3, 4

Recognizing time as the critical tool for organizing the elements of the workflow, Gilbreth used film to analyze the body's range of micro-movements. Establishing case studies in the kitchen, field, and office, she identified the range of plausible movement across daily activities (i.e., baking), and broke embodied activities into minute gestures called *therbligs* (Fig 3).[15] The human body was thus conceived as a series of interlocking components fitted snugly into the environmental workflow. Gilbreth explored the circular routing plan for typical American kitchens by plotting a standard path of motion and removing excess space between the labouring body and its environment. With the aim of minimizing time spent in the kitchen, the circular routing plan had a table on wheels in the centre of the room and could easily be

rolled to the counters and appliances along the walls. These designs would be popularized in the New York Herald Tribunes "Four Model Kitchens" published in 1930 (Fig. 4).

3.2 Rapid Design
After World War One in Europe and North America, the interwar period saw rapid production in the construction industry, fomenting an aesthetic ethos that focused on standardization and mass production. While architectural manifestoes were paradigmatic to these changes, a new type of architectural writing also emerged, one that determined underlying technical standards of production, and remains in use today: the book of architectural standards. The single differentiating feature of these books from architectural treatises and manifestoes was that they dictated neither an aesthetic character nor a formal vocabulary, but instead were focused on the standardization of measurements using the diagram as the central mode of communication. As Hyŏng-min Pae has argued, the diagram enabled a process whereby one could "correlate the unit of production—the functionalized body of the worker—with a spatial area."[16] Unlike a drawing or a plan, diagrams are a graphic shorthand that anticipate new organizations.[17] As such, they are "not simply a reduction from an existing order," but rather are an instruction of action or of a method of approach that scarcely resembles what they produce.[18] Diagrams are oriented to the question of *how* architecture is produced by translating operations, data, or dimensions into a schematic image.

A central concept shaping these architectural standards books was the idea of the general public. The first such type of standard book was Frederick Ackerman's *Architectural Graphic Standards* published in 1932–1933. Like Le Corbusier, Ackerman passionately supported mass housing initiatives through rapid production, but he focused exclusively on dimensions and specifications of the built world, including architecture, furniture, threshold and corridors, details, and outdoor features. For Ackerman, the diagram was the most efficient method to communicate technical information about building practice, stating that the Architectural Graphic Standards used "simple language of facts which technical men use for a scientific document," an ideology that was adopted from Scientific Management.[19] Ackerman's books of standards integrated illustrations depicting the average user as an able-bodied person at person five-foot-nine in height—notably specifications that were compiled not from research, but from intuition and anecdote.[20] Ackerman's European contemporary, Ernst Neufert, would publish the influential *Bauentwurfslehre* in 1936, known in English as *Architects' Data,* which also conceptualized the standard user, this time from historical European data sets outlining average body measurements.[21] Neither drew upon the spectrum of embodied difference in developing the human template envisioned as the user of each of the various sets of measurements.

4. Standard as the Bare Minimum
In Ackerman's socialist-technocratic vision, standards assumed the central role of facilitating rapid production, which he thought was instrumental to the development of public housing construction in the USA. Although his manual is now understood as a tool of capitalist production, in its own time it meant to counter the "price-system," or capitalism in the face of New York's housing crisis, by instrumentalizing technocracies to rapidly build affordable housing.[22] Ackerman thought that corporate self-interest would lead to stylistic preference and novelty, and that the rationalization of the building process through the standardization of design would be an efficient way to keep building costs down and provide more housing of better quality. The "typical" or "average" human was centred in this project to represent the general public, around which standard architectural dimensions could be organized.

Similarly, the housing crisis in 1920s Germany led architects to explore the "standard" as a measure of quality through the institution of a bare minimum, connoted in the phrase "the standard of living." Walter Gropius, Ernst May, and Alexander Klein developed the concept of *Existenzminimum,* a framework that critically explored the relationship between the dimensions of small dwellings and the effect such dwellings would have on the social and, later according to Klein's interests, psychological well-being of occupants.[23] The question that *Existenzminimum* implicitly asked was something along the lines of "What is the social and psychological toleration threshold for a small dwelling?" Other questions emerged, such as, how is a standard of living attained? These inquiries led to a series of debates at the 1929 II CIAM in Frankfurt, which questioned the qualities of modern domesticity, and which itself was dominated by the topic of *Existenzminimum*. The title of the event was *Wohnung für das Existenzminimum* or *Dwelling for the Minimum Level of Existence.*

5. Confronting the Standard
Gearing the framework of the standard to a minimum of living presented problems. May, for instance, critiqued the approach, asking "How should the home for the minimum standard of living be? For now, it is almost impossible to give a positive answer to this question; it is instead possible to answer in a negative way."[24] Karel Teige also critiqued the *Existenzminimum,* arguing that establishing affordable housing opportunities by developing a minimum standard that merely shrank regular dwelling dimensions to a tolerable condition (as imagined for a typical human occupant) was encouraging a

mediocre, normative, and non-modern system of dwelling.[25] For Teige, the problem was the persistence of the Bourgeois individual domestic arrangement—merely miniaturized—that perpetuated normative ways of living.[26]

Problematically, the bare minimum, which is meant to protect public interests by establishing the lowest attainable bar, is too often used as the "optimal" framework for design. It is within this context that critiques of the relationship between the standard and the human body intensified in the 1970s. The two concepts of the standard 1) as a rule of the average, whether a way of being or doing, and 2) as a minimum level of protection, came under fire at this time when the human body was centered within the Disability Rights movement. At this time, American accessibility laws were instituted to mandate minimum standards through building codes or legislation.[27] A significant critique of standards that define the measurement of human bodies as well as conventional and/or minimum dimensions of architectural, urban, and ergonomic spaces, came from disability activist Ronald Mace, who coined the term and framework *Universal Design,* an approach to designing buildings that can be used by a range of people with multiple abilities and disabilities, without the need for adaptation, retrofits, or building code minimums.[28] As a person with a disability, Mace was interested in how Environmental Design Research (EDR) could challenge architects' reliance on standards that were (a) produced intuitively, anecdotally, or based on the concept of the average human, and (b) defined by the bare minimum through legislation.[29] EDR proposed an overhaul of the existing systems, processes, and manuals defining standard processes and dimensions with a new approach led not by architects but by specialists working interdisciplinarily that drew from the real experience of people (Fig. 5). EDR's plan also lay out reports based on accrued evidence about *how* real people live and move about in the world—evidence that challenged both paradigms of the ideal and the average human body in architectural design.[30] Mace's aim was to develop new epistemology instead of merely retrofitting manuals from the 1930s like AGS and *Architects' Data* (Fig. 5).[31]
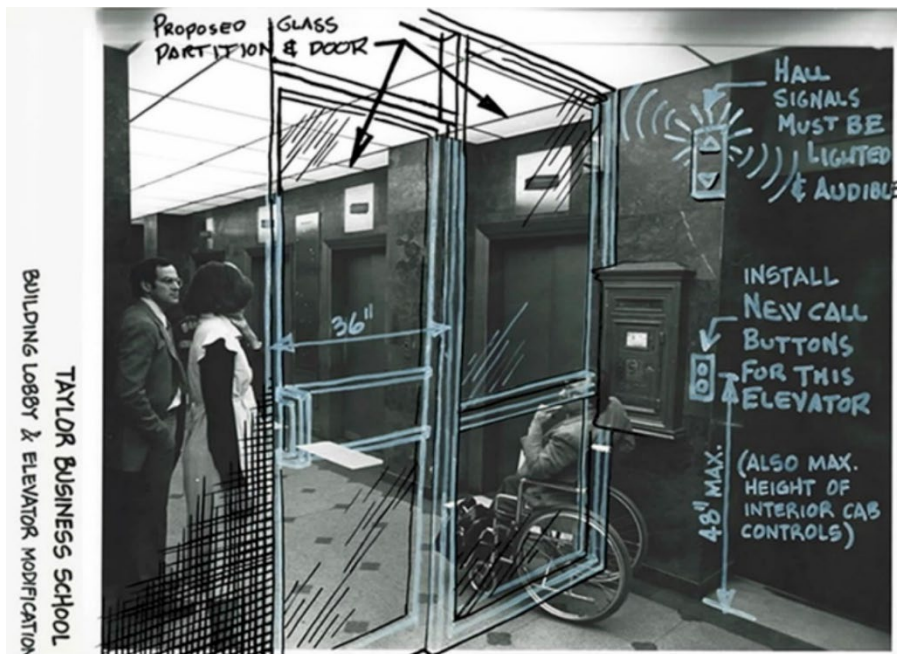
Fig. 5

Mace's research reflects a paradigm shift that sought flexibility in design and an approach of whole-person methodology that includes the emotional and social spectrum of human difference. Despite these important proposals, the standard still defines the landscape of disability inclusion today, having been incorporated worldwide into various building code amendments following accessibility legislation demanding barrier-free space. Today, standards of accessible design require that public buildings in most North American and European countries maintain bare-minimum standards: wheelchair turning radius, barrier-free corridors, paths of access, and so forth. Yet the application of these accessibility standards adheres to a bare-minimum ethos operationalized by the checklist. First, accessible dimensions still exclude wide-ranging lived experience by representing the broad possibility of human experience as a set of diagrammatic standards, such as the size of a door or the calculations of a turning radius. As Berkeley professor Raymond Lifchez once critiqued, "Emphasis on technical specifications alone transforms the disabled into impersonal objects," such as wheelchairs with a given turning radius, rather than as humans with a day in the life.[32] Second, although minimum specifications and standards mandate negligible criteria, they are often used as the *optimal* way to design for disability inclusion.

5.1 Beyond the Standard: Designing for Differentiation

In the examples above, the idea of the standard has formed through its relationship with these terms—average, typical, general, or normal—therefore, it follows that difference and atypicality, especially of bodies, would present a deep challenge to the standard's *raison d'etre*. Recently, scholars and architects have confronted the assumed "average" user and the dominant, standardized body of measurements in architectural design. While Aimi Hamraie has revealed the socio-political armature of standard processes and ideologies, Jos Boys and Zoe Partington, Sara Hendren, David Gissen, among others, have forged a path for difference as a critical and creative practice.[33] Standards in architectural design and representation continue to be challenged through experimental modes of representation. Atmospheric drawings of Phillipe Rahm, DOGMA, as well as the graphic anatomy drawings from Atelier Bow-Wow, bring together elements that were conventionally presented separately. Atmospheres, spatial programs, and details in these graphics mingle with social and phenomenological qualities that are based on wide ranging human experiences.

Mario Carpo has traced the emergent non-standard paradigm, driven by projective geometries, differential calculus, and algorithmic reproduction, which threatens to turn historically standardized practices upside down.[34] These shifts in digital production are no longer reliant on a physical matrix producing identical objects or architectural elements, but instead enable the possibility of a non-standard series of similar objects.[35] More recently, rapid prototyping, 3-D modeling, algorithm, predictive technologies, and discrete and fragmented design practices, among others, eliminate the need for standard data sets, whether human bodies or objects in the world. Moreover, the symbiotic manufacturing workflows that draw upon subtractive and additive processes using routers, millers, and printers also feed into the potential to subvert the standard. The promise of digital fabrication is that mass production no longer depends on standardization, but can produce customized, differentiated, and variable designs and products.[36] For atypical bodies that defy the category of "average" and resist the standard, the unlocked potential of digital fabrication is that customizable environments can be built to flexibly fit the spectrum of bodies without added cost.

5.2 Conclusion

This paper has argued that "the standard," in its various manifestations, thrives in an invisible system that is dependent on and perpetuates "normal" templates of humans, architecture, and design. I posit that three imbricate contexts have inflected the concept of the standard to our day. They include (a) the standard as a body of average measurements for anthropometry, or the measure of human beings, (b) the standard as a module that facilitates logistics, and (c) the standard as a bare minimum. While the standard remains a building block of today's Western capitalist societies, socio-political and technological resistance, as well as the social critiques of standard bodies, processes, and spaces in the form of disability scholarship and the technology of digital fabrication, pose an ontological challenge to the standard in our future.

Notes

1 Le Corbusier, *The Modulor: A Harmonious Measure to the Human Scale Universally Applicable to Architecture and Mechanics.* (Trans. Francia, P, and Bostock, A. London: Faber & Faber, 1956); Jean Louis Cohen, "Le Corbusier's Modulor and the Debate on Proportion in France." *Architectural Histories*, 2(1). no. 23 (2014). The idea of the Modulor was first codified in 1945.
2 Sigfried Giedion, *Mechanization Takes Command: A Contribution to Anonymous History* (New York: Oxford University Press, 1955).
3 Mario Carpo, *The Alphabet and the Algorithm*. (Cambridge, Mass: MIT Press, 2011); Mario Carpo, The Second Digital Turn: Design Beyond Intelligence. (Cambridge, Massachusetts: The MIT Press, 2017), 154-155.
4 Lennard J. Davis, "Introduction: Disability, Normality, and Power" in *The Disability Studies Reader,* ed. Lennard Davis. Fifth edition. (New York, NY: Routledge, an imprint of the Taylor & Francis Group, 2017); Aimi Hamraie, *Building Access: Universal Design and the Politics of Disability.* Minneapolis, (MN: University of Minnesota Press, 2017); Rosemarie Garland Thompson, "Misfits: A Feminist Materialist Disability Concept." *Hypatia* 26, no. 3 (2011), 591–609; Sara Hendren, *What Can a Body Do? How We Meet the Built World.* (New York: Riverhead Books, 2020); Jos Boys, *Doing Disability Differently: An Alternative Handbook on Architecture, Dis/ability and Designing for Everyday Life.* (London: Routledge; 2014).
5 Le Corbusier, *The Modulor,* 37; Cohen, "Le Corbusier's Modulor".
6 Le Corbusier, *The Modulor.*
7 Todd Rose, *The End of Average: How We Succeed in a World That Values Sameness* (Toronto, Ontario: HarperCollins, 2016), 35.
8 Ibid.
9 Hamraie, *Building Access,* 33.
10 Garland-Thompson, "Misfits."
11 Frank B Gilbreth, *Bricklaying System.* (New York, M.C. Clark Pub. Co., 1909).
12 Frank B. & Lillian M Gilbreth, *Applied Motion Study.* (New York: MacMillan, 1919). For example, the "Simultaneous Cycle Motion Chart" shows a typical body articulated into its kinetic parts, aligned to time increments, and engaged in a physical task (i.e., grasping).
13 Lillian Moller Gilbreth, *The Quest of the One Best Way. A Sketch of the Life of Frank Bunker Gilbreth.* (Chicago: Society of industrial engineers, 1926).
14 Lillian Gilbreth, *The Psychology of Management, the Function of the Mind in Determining, Teaching and Installing Methods of Least Waste.* (London: Pitman, 1920).
15 The Gilbreths did work with disabled people in this context to develop flexible kitchens and to understand the range of activity afforded by disabled bodies. See *Motion Study for the Crippled Soldier* published in 1917.
16 Hyŏng-min Pae, *The Portfolio and the Diagram: Architecture, Discourse, and Modernity in America.* (Cambridge, Mass.; MIT Press, 2002, 171).
17 Ben van Berkel and Caroline Bos, "Diagrams: Interactive Instruments in Operation," *Any,* no. 23: 22 (1998).
18 Stan Allen, "Diagrams Matter," *Any.* no. 23: 22 (1998), 17.
19 Ibid.
20 Paul Emmons and Andreea Mihalache,"Architectural Handbooks and the User Experience," in *Use Matters: An Alternative History of Architecture*, ed. Kenny Cupers (London: Routledge, 2013), 44-45.
21 Nader Vossoughian, "Standardization Reconsidered: 'Normierung' in and after Ernst Neufert's 'Bauentwurfslehre' (1936)." *Grey Room,* no. 54 (2014), 34–55. Neufert's publication would undergo at least seventeen language translations and the publication of thirty-eight editions.
22 Emmons and Mihalache, Architectural Handbooks," 43-58.
23 Marco Giorgio Bevilacqua, "Alexander Klein and the Existenzminimum: A 'Scientific' Approach to Design Techniques," *Nexus Network Journal* 13, no. 2 (2011), 297–313.
24 Quote is found in Aymonino, C. *L'abitazione razionale. Atti dei congressi CIAM 1929–1930.* (Venice: Marsilio Editori, 1971); English translation found in: Marson Korbi and Andrea Migotto, "Between Rationalization and Political Project: The Existenzminimum from Klein and Teige to Today," *Urban Planning* 4, no. 3 (2019), 299–314, 301.
25 Korbi and Migotto. "Between Rationalization and Political Project," 301.
26 Dogma, *Loveless. The Short History of the Minimum Dwelling.* (Milan, Black Square: 2019), 245-246; Korbi and Migotto. "Between Rationalization and Political Project," 301- 302.
27 Ronald L Mace, "Universal Design in Housing," *Assistive Technology* 10, no. 1, (1998), 21–28, 2.
28 Sheryl E Burgstahler and Rebecca C. Cory, *Universal Design in Higher Education: From Principles to Practice* (Cambridge: Harvard Education Press, 2008).
29 Hamraie, *Building Access,*135
30 Ibid,133-136.
31 Ibid, 136.
32 Raymond Lifchez, *Rethinking Architecture: Design Students and Physically Disabled People* (Berkeley: University of California Press, 1987).
33 David Gissen, *The Architecture of Disability: Buildings, Cities, and Landscapes Beyond Access.* (Minneapolis: University of Minnesota Press, 2022); Boys, *Doing Disability Differently;* Jos Boys and Zoe Partington's project DisOrdinary Architecture is significant in this regard.
34 Carpo, *Alphabet and Algorithm*, 81-106.
35 Ibid.
36 Carpo, *Second Digital Turn*, 154-155.

Image Captions

Fig. 1. *Modulor Man* Illustration, Le Corbusier, 1948, Image courtesy of © Le Corbusier / Adagp, Paris / CARCC 2023.
Fig. 2. *Identification anthropométrique*, by Alphonse Bertillon, 1893. Frontispiece that shows how to take measurements of the human body. Image courtesy of Wikimedia Commons.
Fig. 3. *Therbligs of Motion*. Frank and Lilian Gilbreth. Location VT Box 163. Image courtesy of Purdue University Archives and Special Collections.
Fig. 4. *Four Model Kitchens* by the New York Herald Tribune, 1930. The illustration shows the routing plan popularized by Lilian Gilbreth. Image courtesy of Purdue University Archives and Special Collections.
Fig. 5. Ronald Mace and a mark-up of buildings based on actual users. Image held in the Ronald L. Mace Papers, MC 00260, Special Collections Research Center, North Carolina State University Libraries, Raleigh, NC, 1978.

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Biography

Dr. Tara Bissett is an urban and architectural historian from Toronto. She is an Assistant Professor at the University of Waterloo School of Architecture. Her research traces the complex and fractured histories of care and care ethics in architectural history and practice, studying the history of women working as architects, planners and organizers, particularly those who designed or planned spaces for other women. On this topic she has written, "Conflicts of Care: Contesting Visions of Architectural Reform," (JSSAC Journal, 2021). Current research work encompasses histories and practices of disability; she is a collaborator on a project on access and creative practice in architectural design with an Enabling Change grant at the University of Waterloo. Her interests include the history of disability rights and justice and alternative housing.

Mundus
Designing landscape as wholeness, thickness, and fertility

Broggini, Federico[1]; Metta, Annalisa[2]
1. University of RomaTre, Department of Architecture, Rome, Italy, federico.broggini@uniroma3.it
2. University of RomaTre, Department of Architecture, Rome, Italy, annalisa.metta@uniroma3.it

Abstract

Plutarch recounted that the founding act of Rome consisted of digging a pit into the ground, where people, coming from nearby sites, were asked to put something good, according to nature, and something beautiful, according to culture: each one threw a handful of their homeland soil. The pit's name was *mundus*, the Latin word for world. It even meant sky, in accordance with Cato and Pliny the Elder. Thus, the Urbe foundation coincided with acknowledging soil as a *mundus,* intimately linked with the subterranean and the celestial realms (comprehensive of atmosphere, air and water) and able to contain multiplicity and diversity. Not secondly, according to the tale, soil as *mundus* is where nature and nurture coexist.

This paper investigates the multiple meanings of *mundus*, considering their inherent complexity and apparent contradiction as an opportunity for advancement in design critical thinking. The ambiguous notion of *mundus*, comprehensive of soil, air, and water, of ground and sky, of nature and culture, can help to overcome the separation between those elements and categories, to which modernity has accustomed us. Moreover, conceiving our habitat as a *mundus* forces us to consider soil, air, and water as a single complex entity, whose parts gradually differ in concentration and density, but act strictly together: *mundus* focuses on the relations and behaviours of each component, that collaborates, exchanges, or repulses with others.

The paper aims to outline the complexity and the relational character of the term *mundus*, considering evidence coming from different references in Western history, from Kircher to Aït-Touati, Arènes and Grégoire, from Ovid to Agamben, from Mosbach Paysagistes to GTL Landschaftsarchitektur, who boldly put in relation subterranean and celestial worlds. The aim is to recur to the concept of *mundus* to extend the limits of design, towards a more comprehensive and integrated approach.

Key words: Mundus, Soil, Relation, Design.

1. Wholeness. The very idea of *Mundus*

According to Plutarch, "Romulus, having buried Remus (...), set how founding the city (...). He therefore dug a circle-shaped pit in the place where the Comitium now stands, where the best of all things, as being beautiful according to custom and necessary according to nature, were laid" (Plutarch, *Vita Romuli*, 11, 1). Romulus needed inhabitants to populate the new city of Rome and so he welcomed both Latin and Etruscan shepherds and overseas people, such as the Phrygians, who had flocked under the leadership of his ancestor Aeneas, and the Arcadians, who arrived following Evander. He asked them to fill the pit with their own things, 'beautiful according to custom and necessary according to nature': "Each of them threw a handful of earth taken from the place from which they came and mixed them together. They called this pit *mundus*, that is the same name by which they call the sky. Then, they marked the perimeter of the city as a circle around the centre. The founder, having attached a bronze ploughshare to the plough and having hitched a bull and a cow to it, pushed them by drawing a deep furrow around the circle, while it was the duty of those who followed him to turn within the furrow the clods that the plough lifted and to take care that none were left out" (Plutarch, *Vita Romuli*, 11, 2).

Plutarch, in essence, attributes to the *mundus* the role of creating and shaping urbanity, in physical terms (city as a spatial entity, made by the circular pit) as well as social terms (city as a community, gathering people together). *Mundus* is indeed the core of this tale of foundation, and it is where the first settlers came to cast both cultural/artificial objects (things that are 'beautiful according to custom') and natural items (things that are 'necessary according to nature'). Soil is among those gathered things, but Plutarch does not specify whether it is among the first group (culture) or the second one (nature), suggesting that it can belong to both collections, being concurrently and inextricably both artificial and natural, manmade and just found. From this tale we also learn that *mundus* means ground but even sky, so merging in the same word two different material and cosmological realms, which are usually meant to be opposite, for composition, position, and behaviors. Thus, *mundus* is a place of encounters, totally inclusive of different entities which, together, create something new: new conceptual categories as well as new places. Furthermore, *mundus* is the Latin word for world, and indeed coming into the world is a way to say to get life. So, coming to the *mundus*, bringing one's soil, is a generative action, in which distant lands and people, ground and sky are mixed to create a new substrate, which speaks about both subterranean and celestial realms, both soils and people, and their mutual and ceaseless exchanges, where natural and artificial dissolve as divided categories and give way to a wholeness, to the world: *mundus*, precisely.

Not secondarily, the notion of world can fluctuate between a universal and comprehensive totality and a selective and sectorial realm: world can be used to mean the planet we live on; it can be associated with specific domains, such as the world of bacteria or the world of minerals; it can even identify a cultural frame as well as a fieldwork. The apparent contradiction of these conceptions reveals the promising potential of the term, whose meaning is affected by both the geometrical and semantic scales of reference. A world can exist and make sense at any scale of observation, it depends on the point of view we adopt and the relations we decide either to consider or to ignore: a world exists only as a situated network of relations and correspondences between the material and immaterial entities that inhabit and surround it. As Jakob von Uexküll observes about *umwelt* (environment), the meaning of world is ambivalent: while being well-defined and circumscribed by the perception of the subject, it is shaped by correspondences with the surrounding realms (von Uexküll, 1957). In other terms, worlds exist through interferences. In this perspective, every world is constantly changing and evolving, according to what happens inside and to what happens in the other nearby worlds, sometimes even reciprocally overlapping and trespassing.

Getting oriented through the origins and meanings of the word *mundus* is tricky, due to its polysemic and homophonic troubles (Puhvel, 1976). The notion of *mundus* is one of the most controversial in Roman culture (Dumézil, 1974), as the thematic plentiful bibliography demonstrates (Fowler, 1912; Vendryes, 1913; Puhvel, 1976; Pailler, 1988; Humm, 2004; Sammarco, 2015; Georgescu, 2019). Its earliest appearance goes back to Cato's *Commentarii Iuris Civilis* (II century B.C.), where it means a hemispherical pit, dug into the soil: "the name of the *mundus* was given from that *mundus* that is above us: because its form is similar to that one [from above]; its inferior part, just as it is consecrated to the Manes gods, is closed all the time, except for those days mentioned before" (Thewrewk de Ponor, 1889, p. 154). Those days are the ones of the *Mundus Cereris* ritual. According to Varron (Macrobius, *Saturnalia*, 16, 18), the *mundus* pit was regularly sealed with a stone called *lapis manalis*, but during the *Mundus Cereris* — on August 24th, October 5th, and November 8th — the stone was removed, and the underworld was connected with the earth surface, allowing the dead souls to walk among the livings. Romans used to say that during those days the *mundus patet* (*mundus* is open) (Fowler, 1912). The ritual refers to Cerere, an Etruscan goddess protecting harvests and fertility (Coarelli 1983, Magdelain 1976, Dognini 2000). Dedicating a ritual of connection between life and

death to the goddess of fecundity could sound contradictory, but it is another way to confirm *mundus* as a wholeness: Cerere presides over life cycle, where birth, death, and resurgence cannot be separated because they are just moments of the same dynamic. The worship of Cerere is related to the cult of Tellus (Ovidius, *Fasti*, I, 671-674; Eliade, 1970), corresponding to the Greek goddess named *Gea* or *Chtonìa,* depending on the contexts: "the earth is a double reality: *Chtonìa* is the formless and hidden bottom that *Gea* covers with her variegated array of hills, flowery countryside, villages, woods and flocks" (Agamben, 2022). Thus, *mundus* is an ambivalent space that creates a relation with the obscure and deep underworld, while representing the cradle for the cyclical resurgence of life.

The chthonian and agrarian cult of Cerere resonates with the mentioned Plutarch's account of Rome foundation, where *mundus* is a vessel of nature and nurture, soil and harvest, entangled and inseparable as a unique entity, and where the very first image of the *urbe* is that of the bare living soil, very far from the imagery of the monumental Rome we are used to. Leaning on Macrobius (Macrobius, *Saturnalia*, I, 11, 48), Filippo Coarelli places the *mundus* between the altar of Saturn and the Comitium, identifying it with a real object: the *Umbilicus Urbis* (the navel of the city), a conical brick construction rising behind the Rosters, next to the arch of Septimius Severus. It is hybrid and composite, the result of additions and subtractions, made of different types of bricks, pieces of marble stones, and mortars. It is composed of several superimposed parts (Pailler, 1988; Humm, 2004): an underground room, where the infernal divinities lived, recalling the Greek *omphaloi* (Lugli, 1946), with an opening that barely allow to enter into the deepest darkness; an open-air altar, probably dedicated to Cerere (Pailler, 1988); the upper part is well rounded, resembling the base of another construction, probably a *monopteros*-like temple (Verzàr, 1976); finally, the celestial space that surmounts it, where the heavenly gods live. For Humm, "the mundus thus corresponds to the three definitions of a temple given by Varron (Varron, *De lingua latina*, VII, 6): it is at the same time a celestial temple (*templum a natura in caelo*), a space dedicated to the ground (*templum ab auspiciis in terra*), and a *templum sub terra,* similar to heavenly one" (Humm, 2004, p. 53).

2. Threshold. The extension of *Mundus*
Many of the sources recalled in the previous chapter associate *mundus* to a space of transition, a passage to cross and a way to connect. This condition resonates with the meaning of the Italian word *soglia*, i.e. threshold, coming from the Latin *sŏlea*, which in turn originates from *solum* (soil) (Festus, *De Verborum Significatiu,* 129, 1). Soil is indeed a threshold, properly because it is the result of the encounter and exchange between atmosphere and solid rocks: pedogenesis processes are the thickening of this threshold between soil and air. Due to the erosion, sedimentation, and diagenesis operated by the wind, water, and temperature ranges, rocks are separated in fine-grain minerals that let air penetrate, water infiltrate, bacteria and other forms of life inhabit. The result is a stratification of different horizons that gradually differ in material composition: from the top layer, which is rich in air, organic matter, vegetation, roots, edo-fauna, and with bigger pores, to the lowest soil horizon which is rockier because the minerals are not fully degraded yet, thus pores are narrow. In this sense, soils "becomes the name of a melange of ongoing processes: a great number of waves of action that act and retroact with unforeseeable effects, as effects always are. Soil is alive in its plural relationship with bodies" (Bianchetti, 2022, p. 91). This makes soil a vibrant matter permeated by impulses, desires, and sacrifices (Ibid.), like a threshold-space of contact and contamination (Gentili, 2022). At this regard, Walter Benjamin extends the significances of threshold, tracing the etymology of the German term for threshold (*schwelle*) to something fluid and liquid (Benjamin, 1999). Indeed, the word *schwellen*[1] means 'to swell' and it encompasses the meanings of grow, blow up, overflow (Gentili, 2022). Like soil, the threshold is a place of transit and mutation, where inside and outside are not antithetical, but substantially and ambiguously indistinct (Lazzarini, 2016). Recurring to the idea of fluid threshold, Benjamin overcomes the dichotomous scaffolding of Western culture, which frames the world within binary oppositions and irreconcilable polarities.

Movements and stratifications locate and happen inside the depth of the soil. As in the myth of the foundation of Rome, to make something happen, to create a new city and a new community, to merge death and life, ground, and sky, it is necessary to go into depth, to dig, to explore what is hidden inside. Indeed, the concept of depth is inseparable from soil. Vendryes identifies the origin of the Celtic word for world in the root *dubno*, from which many languages (Irish, Lithuanian, old Slavic, Germanic) derive their respective words meaning depth and hollow; he hypothesizes the double meaning of the Celtic word *dubno* as both depth and world, intending *dubno* to be the root of the Latin world *fundus* (depth) and *mundus* (world), due to a series of phonetic accidents (Vendryes, 1912). *Fundus* means even a small farming land (in Italian, still today *fondo* stands for the adjective 'deep' as well as the noun 'farming field'), again recalling the linkage between soil, depth, and world.

Over time the meaning of *mundus* has been changing but confirming its leanings for wholeness. The Seventeenth century has been a crucial time for exploring and understanding the world, from medicine to astronomy, from geology to biology. It can be depicted as a time of transition, where the scientific method was developing, while a system of knowledge based on believes, myth, and traditions was still ruling. At that time disciplines were not so defined and hermetic; they weaved together fluidly, and the scholars used to navigate through many fields of knowledge (Consigliere, 2023). In 1664 Athanasius Kircher published his masterpiece *Mundus Subterraneus* (Fig. 1), an immersive journey through the earth, deep to the centre and up to the sky and beyond, trying to comprehend the working principles of the universe and the relations between elements like fire, water, ground, and air. Kircher elevates soil and subterranean realm to prominent spaces of effervescence and liveliness, depicting them with impressive section-drawings, from single clump of dust to mountains and volcanoes, until the entire globe, describing the connection between the fire in the core of the planet, the boiling inner water, the movement of the earth crust, the ocean currents, even the wind and the clouds in the sky, whose thickness is comparable to the one of the earth. Kircher's opera offers a collection of striking and fascinating features, divided in twelve books, each one dealing with a specific topic — from hydrography to volcanoes, from metals to minerals, from magnetism to tides, from fossils to dragons, from plants, seeds, and roots to insects — and speculating even about the invisible transformation of these matters, thanks to both a direct observation of real phenomenon and a vivid imagination, merging fabulism with the knowledges that were developing at time in Europe[2]. Kircher's conception of the world as an entity in continuous transformation, whose matter is alive and fluidly changing inside a constant flow, explains why his investigations cross and tie together different scales of observation, from an atom-like dimension (Book X, XI and XII where he deals with magnetism, alchemy, panspermia, and chemistry) to the geological forces that shape the earth (Book II, III and IV), ascribing to this ceaseless metamorphosis the eruption of volcanos, earthquakes, or the ocean tides. The concept of a world made of living and fluid matter clearly emerges in the last two books (Book XI and XII) which are dedicated to alchemy, a field of knowledge that, besides its literal meaning related to the fusion of metals, can be more broadly intended as an attitude to see the world as an entangled living system.
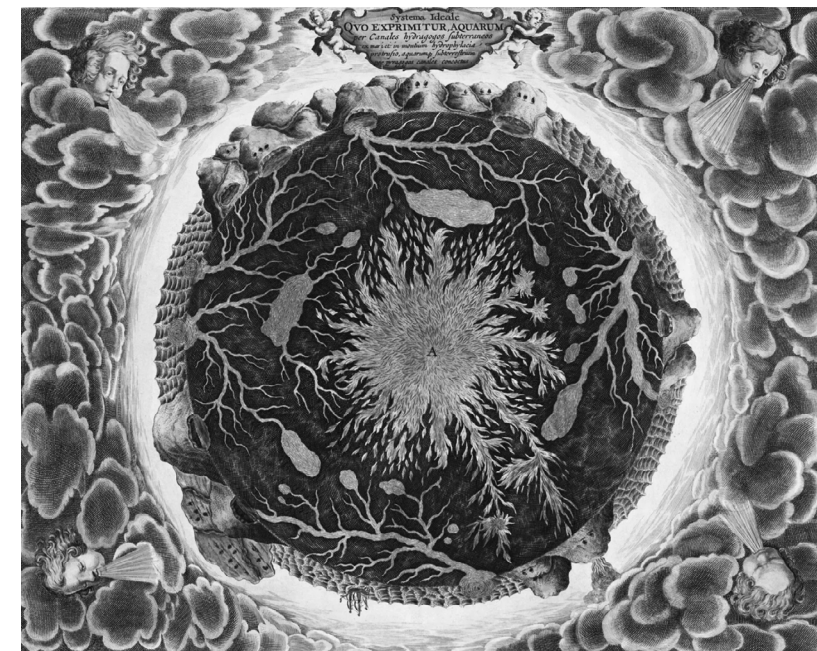
Fig. 1

In 2019, about 350 years after *Mundus Subterraneus,* the theatre director and science historian Frédérique Aït-Touati, the architect and cartographer Alexandra Arènes, and the architect and visual artist Axelle Grégoire co-signed the book *Terra Forma. Manuel de Cartographies Potentielles,* which presents a new cartography that considers the implications of living beings and evolving matters in the construction of the world (Fig. 2): "*Terra Forma* proposes to re-interrogate the maps but also, by their bias, the state of the world. One of the aims of the experiment is the modification of the classical attributes of the map to consider data and entities, human and non-human, living and non-living, which have often been hidden in conventional representations" (Aït-Touati, Arènes and Grégoire, 2019, p. 13). In the temporal gap that divides *Mundus Subterraneus* and *Terra Forma,* modernity has been emerging and establishing, with a deep changing in the way of questioning, understanding, and explaining the world: the knowledge systems got increasingly specialised, and the fields of studies got

separated, focusing on progressively more singular and mutually isolated topics. This attitude had great consequences on the representations of the world, especially in cartography (Farinelli, 2003), so that the imaginary of the world rapidly became that of an abstract, still, and stable surface, without any living domains. *Terra Forma. Manuel de Cartographies Potentielles* overturns the modern representations and focuses on the so called 'critical zone' (Latour and Weibel, 2020), meant as the external layer of the Earth, few kilometres thin, where all known living beings, humans included, and their resources lie, and where most of the transformations of the geology produced by human beings over the last centuries are evident and undeniable. Soil, *point de vie*, living landscapes, borders, space-time, (re)sources, memories are the seven models used by the three researchers to propose new points of view on the world. Thus, in the chapter 'soil' the globe is turned-up like a glove, putting the deepest layers on the exterior part of such an inverted *mappamondo* (world map) (Fig. 2); in the subsequent chapter named 'point de vie' (a wording coined by Emanuele Coccia) the orthogonal grid of Euclidian geometry deforms and evolves according to the actors who moves across space, admitting that the shape and extension of space are not a matter of fact but a relational condition, so that time partition curves in a spiral-like model, questioning the modern vision of history as a linear development. *Terra Forma* is the result of an incessant back and forth between data, experiences, attempts to modelling, imagination, and return to the ground. Just as *Mundus Subterraneus* was an attempt to explore and understand a hitherto unknown world, *Terra Forma* is an endeavour to re-compose worlds that climate change and Anthropocene have made us discover into constant metamorphosis and entanglement. By redefining, or rather extending, the traditional cartographic vocabulary, *Terra Forma* is a sort of manifesto for the foundation of a new geographical, political, and design imaginary. In fact, on one side it is a way to find our bearings in the world as it is, on the other it is an attempt to figure out our position in the world as it will be, imagining an increasingly complex, denatured, re-natured *mundus*. It spurs to cross the thickness of the world, looking for connection between design and ethology, geochemistry and biology, that kind of world that traditional cartography cannot capture, and that traditional design ignores.
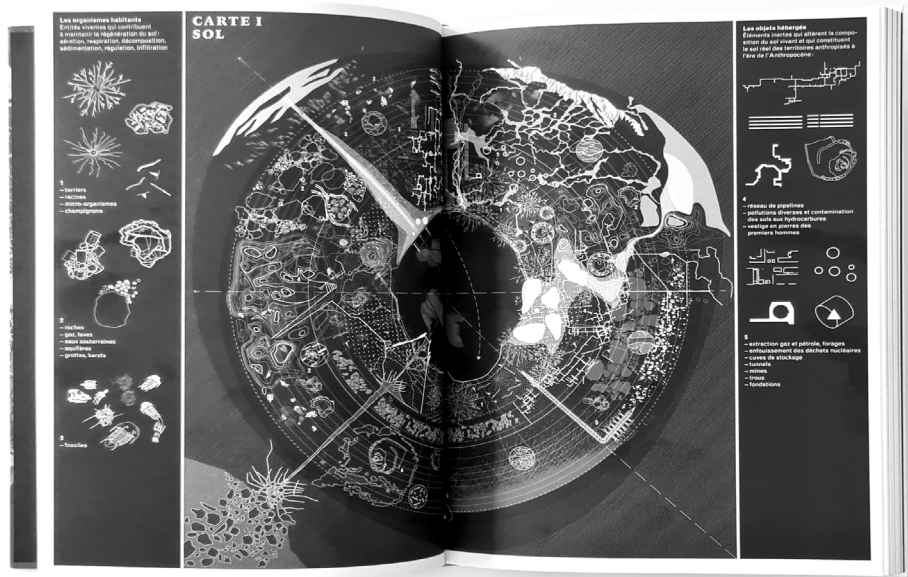
Fig. 2

3. Fertility. The destination of *Mundus*
The idea of *mundus* strongly resounds in some contemporary studies, variously connected with design. For example, the *Solid Fluids* theory recently explored by Tim Ingold and Cristián Simonetti (Ingold and Simonetti, 2022) poses itself at the intersection of chemistry, physics, and anthropology. According to them, the world is a constant flow of matter that passes through different states, where solidity and liquidity are just among the ones that humans best perceive. It is even a matter of scale: "whether we take a material to be fluid or solid may simply be a matter of granular scale. A particle of sand may be solid with regard to its crystalline structure, but sand *en masse*, as in a desert, in dunes, or even pouring through the waist of an hourglass, behaves very much as a fluid as it is sculpted into forms of movement such as whirls, waves, and swellings. Mudslides, avalanches, and surging glaciers are among many natural examples in which apparently solid matter gives way to flow, often with devastating consequences" (Ingold and Simonetti, 2022, p. 7).
Addressing into the field of design this perspective of the unescapable relational and inclusive value of the term *mundus*/world could be a way to extend the capacity and possibility of architecture[3]: it can help to have a comprehensive and integrated approach that focuses on relations between factors and

actors involved in shared environments and boosters the generative role of design. Specifically, looking at landscape architecture as a peculiar design world, the notion of *mundus* can be convenient to reconcile some elements that modernity has accustomed us to think as separated entities: soil, air, and water, ground and sky, nature, and culture, human and not human. Conceiving our habitat as a *mundus* forces us to consider these elements as a unique and interlaced entity, whose parts gradually differ in concentration and density, but act strictly together (Meulemans and Tondeur, 2022). In this perspective, thinking about design as a way to make *mundus* prompts to weave unprecedented relationships and correspondences within human and non-human entities, with other materials and other forms of life, crossing scales ranging from the infinitely small to the infinitely large, in a temporal spiral where past, present and future can coincide.
The meaning of *mundus* is rooted in soil as the interface where air, water, earth, rocks, vegetation, and other forms of existence meet and entangle. Starting from soil, *mundus* extends and encompasses the entire environment in which we live seamlessly, as a single entity that differs in concentration and density. A pair of samples taken from the contemporary landscape architecture scenario could help us to underline the potential application of this approach into design, properly focusing on soil meant as *mundus*, as a promiscuous place par excellence, a transitional space experienced and designed by multiple elements and bodies.

The park of the Louvre Lens Museum, designed by the landscape architecture firm Mosbach paysagistes (2014), is a meaningful reference. Lens is a city in the north of France, since the mid-19th century almost completely invested in the coal mining industry, that has been deeply imprinting the local landscape, economy, and society. Through overturning and displacing operations — excavating and cutting into the subsoil, moving and exporting ground from below to above, moving it from site to site — the underground world poured to the surface, ground masses moved to other sites, giving rise to new topographies and even to new atmospheres, due to the combustion of coal. Indeed, the Louvre Lens Museum is located on a 25 hectares brownfield produced by coal mining. The landscape design for the open spaces belonging to the museum resorts to soil as a detector and seismograph of the geological, environmental, and social transformations that affected the site. Catherine Mosbach treats soil as an active subject, playing at the intersection of three main layers – mine, environment, culture – and using ripples, pits, deformations, depressions, reliefs, continuous changes of material, from concrete to turf, from asphalt to bare ground, as the basic elements of the park (Fig. 3). While walking through the Louvre Lens Museum Park and looking around, it is easy to feel immersed in a moving landscape, where different conditions of soil intersect and interact into a continuous flow that reveals recent geological processes, adapts, and reacts to different atmospheric and seasonal conditions, and finally constitutes a space that is an actual part of the museum experience. Like a *mundus*, the Louvre Lens Museum Park is a dense field of entangling relationships weaving chemical and physical correspondences between atmosphere, soil, and subsoil and temporal correspondences where past, present and future overlap. It is worth to note that some parts of the park are arranged as bare soil: it is a totally unusual solution in landscape design, perhaps because bare soil recalls ideas of neglect, casualness, unproductiveness, which are problematic moral categories typically perceived even as aesthetic aberrations. It is not by chance that dirty is the English word for meaning unpleasant or not clean (from dirt, which stands for soil) and that neglected and polluted sites are called brownfields (as brown is the usual colour of soil). When turned into a verb, the English word soil means anything that gets dirty and muddy (sullied); what an American calls dirt, an English calls soil, and something that is soiled is irretrievably dirty.

Fig. 3

If the Lens site exemplifies how to design a new *mundus*, setting on a rich palimpsest of environmental, social, and cultural mutations, the transformation into a park of the former Bonames airport, closed to Frankfurt, demonstrates that any soil, even the most simplified, neutralized, and isolated one, as the one covered by asphalt, can act as a *mundus* thanks to design. In 2003, once acquired the disused aerodrome, the municipality intends to give the area – a previously wet prairie along the Nedda, a tributary of the Mein – 'back to nature', entrusting GTL landscape studio with the design. Due to the financial and environmental unsustainability of the old river fields' faithful restoration and of the total dismantling of the facilities, included the asphalt strip, GTL adopt an incremental design strategy, aimed to triggering and accompanying the transition towards a progressive re-naturalisation of the site, while guaranteeing the social enjoyment of the site. They keep unmodified about 2/3 of the entire surface of the runway, making it available as an informal playground, very successful for rollers' rides and kites' flight from the very beginning. At the same time, taking inspiration from the pioneering weeds spontaneously growing into the asphalt crackles, GTL break into pieces the remaining part of the runway, leaving the resulting scraps on site. They operate very carefully, breaking the asphalt into different grain sizes, creating different conditions of local humidity, temperature, exposition, pedological substrate, with the aim to welcome some spontaneous living forms and discourage other ones; here and there, plants covering is favoured and speeded up by planting some fifty trees. Therefore, the objective is to encourage a varied and rich colonisation by plants and animals, where the asphalt plays, indeed, an active role in the formation of new soil and the growing of species as a mulching layer. Since its opening in 2004, the demolished part of the runway hosts a still-evolving forest where numerous little mammals, birds, amphibian species, and insects live. Trees have been growing with their roots protected by the asphalt and now the white trunks of the birches stand up through its broken black slabs, in a sort of uncanny landscape (Fig. 4). Some troublesome questions arise: is it whether natural or artificial? Is it manmade or spontaneous? Is it beautiful or ugly, attractive or disgusting? Is it welcoming or dangerous? Is it bad or good? Is it the end of a landscape or the beginning of a new one? Is it the celebration of death or a rebirth ritual? Many answers are appropriate, since contradiction and ambivalence are the very essence of this situation, giving itself as a *mundus*, the site of wholeness, of coexistence and interference between soil and sky, culture and nature, here and elsewhere, death and life.
Mundus offers itself as a paradigm for a project approach, capable of creating relationships or making explicit those that already exist, without any anxiety of simplifying.

Fig. 4

In conclusion, tracing the etymology of *mundus*, between ambiguity and multiplicity, reveals how *mundus* is capable of encompassing and holding together some founding categories of contemporary landscape design. *Mundus* implies wholeness because, by interweaving multiple scales of space and time, it relates and creates correspondences between the various actors - human and non-human, organic and inorganic - that shape it. *Mundus* is a threshold because it is a thick platform of encounters, clashes, interferences in a constant mutable process. *Mundus* is fertile because, in the grip of intermingling, it is incessantly capable of resurgence and new life cycles[4].

Notes
1. According to Benjamin "the threshold must be carefully distinguished from the boundary. A *schwelle*, threshold, is a zone. Transformations, passages, waves, actions are in the verb *schwellen*, swell, and the etymology ought not to overlook these senses" (Benjamin,1999, p. 494). In the notes he writes: "*schwelle*, cognate with the English word 'sill' has the root sense of 'board', 'structural support', 'foundation beam'. According to current information, it is etymologically unrelated to *schwellen*" (Benjamin,1999, p. 991). Schwellen means 'blow up' and it is used also to mean the movement of the ocean when it rises and falls without the waves breaking. Beneath the etymological discrepancies the German philosopher implicitly suggests a strong relation of the meaning of the two similar terms, as the threshold is a space that moves, changes and eventually grows.
2. We can consider *Exercitatio Anatomica de Motu Cordis et Sanguinis in Animalibus*, published by William Harvey in 1628, a mature account on the circulation of blood; Kircher explicitly refers to it when he proposes an organic comparison between the human bodies vascular system and the Earth's hydrographical network. Another critical reference is *Micrographia* by Robert Hooke (Hooke, 1665), one of the most relevant scientists of the 17th century, who is the inventor of the modern microscope, thanks to which he explored the world of insects and plants at the scale of the cell.
3. In this context, architecture is intended as a set of interdisciplinary and operational knowledges that is translatable in a design process. Therefore, its range spans multiple scales, including clothes, furniture, buildings, urban districts, infrastructure, landscapes and so on: it could potentially address all aspects of reality (Hollein, 1968).
4. The authors contributed equally to this work.

Image captions
Fig. 1. Plate from Athanasius Kircher's *Mundus Subterraneus,* showing the functioning of underground water network and the relation with the heated core of the Earth. Source: https://www.sensesatlas.com/territory/mundus-subterraneus-athanasius-kircher/
Fig. 2. Drawing of *Terra Forma. Manuel de Cartographies Potentielles,* showing the new cartographies resulting from the inversion of the point of view. Source: http://s-o-c.fr/index.php/terraforma/
Fig. 3. Soil patterning of the Louvre Lens Museum Park, 2018. Credits: Luca Catalano.
Fig. 4. Trees grown amidst the torn asphalt fifteen years after the Bonames airport was converted in a park designed by GTL Landschaftsarchitektur, 2019. Credits: Leonhard Lenz.

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Biography
Federico Broggini is architect graduated at Accademia di Architettura di Mendrisio. Since the early experiences he focused his interests on urban and landscape design, in particular dealing with soils and water management concerns. Since 2020 he is part of Latitude Platform for Urban Design and Research, an interdisciplinary collective of architects, urbanists, anthropologists, and photographers based in Bruxelles, Venice, and Rome, that carries on research and design projects with a particular regard to socio-environmental themes. In 2022 he started a PhD in landscape architecture at RomaTre University. The thesis explores the world of urban soils, in particular sealed soils with asphalt, investigating their intrinsic values in landscape design practices intersecting ecology, art, matter sciences and history.
Annalisa Metta is professor of Landscape Architecture at Roma Tre University. In 2016- 2017 she won the Italian Fellowship Grant for Research at the American Academy in Rome, to which she has been a consultant ever since. Her research concerns contemporary landscape design. Her books include: "Il paesaggio è un mostro. Città selvatiche e nature ibride" (DeriveApprodi, 2022), "Alberi! 30 frammenti di storia d'Italia" (MarsilioArte, 2022), "Verso sud. Quando Roma sarà andata a Tunisi" (Libria, 2018), "Anna e Lawrence Halprin. Paesaggi e coreografie del quotidiano" (Libria, 2015). In 2007 she was one of the founders of Osa architettura e paesaggio, with which in 2012 she signed the curatorial and installation project for Bosco Italia, the Italian pavilion at the Venice Architecture Biennale. Recent implemented works include: the urban park on Lungotevere Flaminio, Rome (2023) and the installation *Every 9 Days*, at the American Academy in Rome (2022).

Architecture, Transfeminism, Queerness
Reimagining the urban space

Calderoni, Silvia
CIRSDe, Interdisciplinary Centre for Research and Studies on Women and Gender, Turin, Italy, calderonisilvia3@gmail.com

Abstract

This study highlights how different representations of architecture and urban space have contributed to the fossilization and normalization of binary gender identities. Indeed, the essay focuses on the increasing attention being given to transfeminist and queer studies in relation to architectural space.
Specifically, a focus on gendered language in architecture is given, aiming the attention to how the architectural experience has changed after modernism, when gendered language seemed about to disappear, taking up Adrian Forty's studies. Regarding the modernist period, the essay presents two different feminist approaches to the study of architecture, one done by Beatriz Colomina and the other by Paul B. Preciado.
Finally, a reading of a few words is given. These words are contextualised to the context of architecture, and the paper aims to highlight the shifting meaning developed through queer transfeminist analysis. The goal of this paper is to show how architecture and urban studies relies on a patriarchal system of power and how queer transfeminism can support language in its role of challenging the norms.

Keywords: Architecture, transfeminism, queer, language, critique.

1. Introduction

Between 1948 and 1955, Le Corbusier designed *Le Modulor* – used by the architect as a scale of proportions to create the *Unité d' Habitation* – and gave it the shape of a tall man with male genitalia.[1] Several centuries earlier, Aristotle held that «the city is the man»[2] and, in the fifteenth century, Leon Battista Alberti described the ideal home as a prison for women.[3] The concepts of masculinity and femininity have been used for centuries to describe the space, architecture, the city, and the meanings and considerations behind those terms have informed how people perceive their own bodies in the space as well.

The debate around the use of respectful and non-discriminatory words - considering different layers of discrimination such as gender, race, class, age, and disability - in the public sphere is flourishing and still open. Indeed, it has also had an impact on the world of architecture and urban planning, yet, in a disorderly way. Nevertheless, there are some elements that are of interest and relevance, and which will be analysed in this essay. The thesis that will be discussed here is that gendered language in architecture and urbanism has contributed in shaping gender binarism and has fuelled stereotyping and discrimination. Indeed, words are not 'just words' And questioning male-centred, discriminatory, and binary language in architecture can, ultimately, challenge practices and the way urban space is articulated. Urgent issues - e.g., the environmental crisis - are particularly sensitive to this approach and can benefit from it. For this reason, the philosophical tools given by transfeminism and queer studies are important for rethinking the world, starting here with the question of how we produce the build environment, and with which words.

To do so, this analysis considers the theory of language in architecture developed by Adrian Forty. From his point of view, architecture is a system composed of:
- *images,* i.e., *photographs* of the building and *drawings* of the projects
- *words,* i.e., the discourses on the works
- *product,* i.e., the work itself.[4]

Forty also talks about the social aspect of architecture during time, and the language used to describe it – this topic became really relevant in the transfeminist discourse about architecture and urban space, therefore it is worth mentioning and will be discussed further in this essay.
It will also be presented Paul B. Preciado's work on the creation of the first pornotopia by Hugh Hefner with Playboy magazine through the use of the architecture proposed in the magazine as a means of constructing masculinity.

In the second chapter, the work of Beatriz Colomina will be addressed, going through the relationship of images and words. Always considering the relationship between language and image in architecture, the issue of sexuality will be addressed because, as Colomina wrote,[5] it has been constantly ignored both in theory and in practice within architecture and urban planning, despite numerous feminist studies have been dealing with it for years. Indeed, according to the author, «the politics of space is always sexual, even if space is central to the mechanisms of cancellation of sexuality».[6]
If sexuality is considered as an element of the built environment, it is possible to include transfeminist reflections within the analysis of architecture and urban space that has always privileged the male gaze and desire. This fundamental operation may: a) question the hypothetical neutrality of the city and the house; b) lead to act in terms of representation, reclaiming the work of marginalized artists and subjects, highlighting the social, political, historical and economic reasons that led to this subject to being excluded from city architectural and design practices, as Linda Nochlin suggests;[7] c) reveal how some existing architectural and urban spaces are used intentionally and/or illegally for gender-based reasons d) allow to conceive the *build environment* as a cultural system of representation[8] on par with other cultural productions.

Finally, a description of what is meant by queer transfeminism in understanding architecture and urban space will be given. The review of some words in architecture that can offer new possibilities through transfeminism as a tool of analysis will also be proposed.

2. Gendered language in architecture. Adrian Forty and Paul B. Preciado

Language is the most important tool for describing political changes, for depicting a work of art and for expressing our thoughts. As research in this regard has sufficiently shown, different spoken and written languages construct different imaginaries and form different modes of thought production. Language thus constructs and modifies the way we think and perceive external space.

According to Adrian Forty, language is a «system of difference, […] good at describing differences in a way that drawings and photographs are not»[9] and architecture is a system composed, beyond the

material product, the images (such as drawings and photographs) and the language, or the words produced around the practice of architecture.
As Forty explains, the practice of gender ascription (or gendering) in the specific language of architecture began during the Renaissance. It was in the interest of architects, artists, and scholars to formulate an architecture-specific vocabulary to structure ideas and judgements. In his book, Adrian Forty lists numerous art critics and artists who described classicism using antithetical and binary adjectives, especially masculine and feminine. Thus, a masculine building implied solidity, simplicity, and virility, and it was suitable for public and majestic spaces. In contrast, a feminine architecture was deemed ambiguous, weak, and decorative. With few exceptions, male architecture was considered superior to its female counterpart: while the former was resolute and clearly expressed its purpose, decorative elements were only allowed when necessary, leaving some room for vagueness and ambiguity[10] precisely because their function was to fascinate. One example is the association of genders with the classical orders, which Forty reconnects with the beginning of gendering in architecture: the Doric order was associated with masculinity, the Ionic one with femininity. It is interesting to notice that the author brings to light Renaissance-era comments on the Corinthian order, compared to the Ionian order, which highlights how there were distinctions not only in matters of the type of femininity but also in the type of sexuality. For example, according to Sir Henry Wotton, writing in 1624, the Ionian order was to be associated with the Matron, while the Corinthian order was to be associated with a lascivious courtesan): We see suggested here the rich potential for the extension of the language of gender from the mere classifications of sexual difference to description of sexual orientation and even sexual perversion. From Wotton's day onwards, sexual deviancy has been a no less valuable source of metaphors than straightforward gender distinction» Forty writes.[11] The theme of *sexual deviance*, to be understood as a set of terminologies used to describe architectural space, varies from words such as *effeminate* to *ambiguous*, *lascivious,* and *characterless,* which are used associated with the concept of femininity to describe, for example, American art and culture since 1830, which has been considered weaker and inferior to European art and culture.[12]

According to Forty, gendered language seems to disappear from critical language with the advent of Modernism: indeed, he explains how it does not disappear but is transformed by analysing, for example, the word *form*, a key term in the modernist lexicon, which in architecture denotes the ability to resist gravity.[13] The term, Forty argues, stands for a masculine ideal and was developed by Heinrich Wöfflin, who, inspired by the philosophy of Kent and Hegel, developed the idea that *form* was based on the «empathic projection of the essence of one's own body into architectural form».[14] This concept reflects Winckelmann's reading of classical figures: in sculpture, form is the representation of the convergence of physical and mental effort during a state of stillness, which is best observed in the male figure. The classical female figure, on the other hand, is traditionally in a resting position. Therefore, the body Wöfflin refers to is the body of a man, and consequently the *form* is a male concept. Indeed, architectural constructions that were considered well-built and efficient were traditionally associated with the masculine, as they embodied an ideal of strength and power that could not be associated with the feminine. Finally, Forty concludes that when scholars and architects stopped defining architecture in gendered terms, as happened in the era of modernism, the identification of superior architectural design as masculine continued to be successful.

Not only sexualized language continues to exist in other forms, but it maintains an important role in architectural and cultural production. One of the main examples concerns the birth of the term *Playboy Architecture*, coined in 1962 by the most influential architectural historian of the 20th century, Sigfried Giedion.[15] Talking about Playboy and its relationship to architectural production, and consequently to the production of a certain idea of masculinity, Paul B. Preciado explains that the famous American magazine was not simply an erotic magazine for teenagers during the Cold War, but a political project that helped create a new imaginary, a new sexual and consumer identity for the American man through architecture, in which architectural taste was critical to success in the art of seduction; indeed, Playboy's idealized world was a reality ingrained into national identity and had a massive global impact.[16] According to Preciado, in book *Space, Time and Architecture*, Giedion wanted to develop a historiography of architecture that could account for the 'modern tradition' as the culmination of the technical and scientific process of modernity, and, for the author, post-war American architecture threatened the realization of that project.[17]
Another example regarding the presence of gender-based comments in architecture concerns the fact that women finally entered the field of architecture and urbanism, working, planning, and elaborating urban projects. Comments that emphasize a gendered use of language are found in architectural criticism, as well as in newspapers.[18]
Looking at the language used to describe and discuss buildings and architectural structures, spaces that are intimately connected to bodies and the life that inhabits them, it can be argued that language historically identifies the feminine as a weak entity and the masculine as a strong one. How language

informed architecture in relation to gender binarism with the arrival of mass media in modernist and contemporary architecture?

3. Feminism at work. Beatriz Colomina on Le Corbusier
This essay started with Forty showing how language in architecture is gendered and sexist, and thus on how space is not neutral but is informed by a male-centred view of space. More prominence should now be given to the modernist period in order to delve into the relationship between language and images, with respect to Forty's argument that gendered language does not disappear with modernism but is transformed. To do so, the work done by Beatriz Colomina will be analysed, starting from a fundament that the author argues, which is that modernism becomes such through its encounter with mass media.[19]

One of the most important architects of modernism was Le Corbusier, who succeeded in giving architecture new perspectives with his Le Modulor. Le Modulor is a patented system of proportions for buildings based on the figure of a human being, but not just any human being: it is a man whose sexual characteristics are visible. He does not just represent a generic male model, but rather embodies a precise idea of masculinity: he is dynamic, 1 metre and 75 cm tall, and shows his dominant right arm stretched upwards. Le Modulor can indeed be considered a sexualised body, because he embodies an ideal of masculinity that is closely linked to the sexual sphere and evokes elements such as power, masculinity, and physical strength that perfectly represent the idea of the modern man.
The modern age is ultimately dominated by technological innovation, capitalism, and globalisation. In economic terms, global capitalism has given everyone access to all consumer goods. Le Modulor is the corporeal representation of this standardisation process, which is at the core of capitalism, as it itself «globalises and standardises the body»[20] and reflects a certain body type to the exclusion of others. Ultimately, Le Modulor is an architectural tool, an expression of a specific male stereotype of masculinity, and contributed to shaping, normalising, and protecting a specific notion of masculinity in the heterosexual family.

Le Corbusier's heteronormative character is also expressed in photographs and films. In his work, the role of windows and light is particularly emphasised. According to Colomina, his photographs give the impression that before the picture was taken «someone was just there».[21] Evidence of this are the objects that populate his snapshots. This someone is obviously a man because such objects are usually associated with male persons. According to Colomina, the woman in these images appears vulnerable, has a «fragmented physique [and seems about] to disappear. She never meets our gaze».[22]

To better understand Colomina's work, it is worth mentioning Ervin Goffman, who theorised that advertising images reflect gender roles and stereotypes and emphasise the subordinate role of women to men. In this sense, he affirmed that «gender performances, like other rituals, can reflect fundamental features of social structure [...]. So, if they represent anything, performances are symptoms, not portraits».[23] Colomina also points out that in the Immeuble Clartè series, the women never look towards the lens or occupy the same space as the men. In a specifi image, the man is looking out over the city from the terrace and is separated from the woman and girl, who are inside and shot from behind facing the wall. In another image in the same series, the female figure is also inside and photographed from behind - her face is not visible - while she is looking at the man who is standing outside with a child. «The woman is looking at the man, the man is looking at the world»[24] Colomina commented. Another image from the exhibition at the Salon D'Automne shows the French architect and designer Charlotte Perriand lying on one of the chairs designed by Le Corbusier, staring at the wall: «She is almost an accessory of the wall» Colomina comments, «She sees nothing».[25]

4. Old words, new words
So far, this essay has explored the work of three different authors, who have analysed gendered written and graphic language in architecture in different ways. Making it simple: if Beatriz Colomina still belongs to that strand that we could call *gender studies*, highlighting how the issues of sexuality in architecture is little discussed but very present, Paul B. Preciado takes a step further and can be identified as a transfeminist author belonging to queer studies. But what does transfeminism and queerness mean, especially in the architecture and urban studies fields?

To do this, it is needed to start from the very beginning, emphasising the role of gender studies in urban studies. Since the 1960s, in the English-speaking context, people have begun to think about space as a site of meaning production and thus how it is not neutral but is instead historically constructed to «support and facilitate traditional gender roles»[26] while also contributing to the discrimination of marginalized subjectivities. From this perspective, space is referred to as heteronormative, as it participates in the normalization of power structures within society.[27]

While gender studies up to this point had focused on the discrimination experienced primarily by white, cisgender women, some studies began to employ a feminist methodology that considered other axes of oppression. Indeed, since the 1970s, an *intersectional* approach has developed to show how forms of oppression are to be found in the relationship between various systems of privilege - including, indeed, racism, classism, sexism, homophobia and ableism.[28] In addition, the intersectional approach also allows for reflection on bodies considered dissident and not sexually normed.[29] In this perspective, the so-called *geography of sexuality*[30] was developed, which studies how space is «constructed around the particular notion of 'appropriate sexual behaviour'»[31], excluding so-called deviant subjectivities (LGBTQIA+) and thus allowing access to citizenship and civil rights on the basis of heteronormativity.[32] In particular, the transfeminist approach encompasses a feminist and intersectional methodology, and the queer approach considers those bodies that deviate from heteronormed sexuality, questioning normativity and orthodoxies, and making fluid the categories of sexuality and gender .[33] Thus, the methodology wants to deal not only with women, but also with all those subjectivities that are discriminated against and isolated by the architectural and structural barriers of the city.

Brady Burrough describes this shift arguing about the distinction between *queer feminism* and *mainstream feminism*, starting from the premises that «gender and sexuality are necessary categories in relation to any research that aspires to be relevant».[34] However, there isn't only one feminism, and mainstream feminism usually tends to be white, neoliberal and refers primarily to a certain type of masculinity as opposed to a certain type of femininity. Regardless of the specific terminology, the approach one wishes to adopt is to place complexity on gender and sexuality, within an anti-capitalist framework, aware of the risk of being the *Willful Subjects*,[35] i.e., the risk of focusing heavily on some types of oppression while forgetting others.

Regarding the field of architecture and architectural language, it is important to specify that transfeminist and queer methodology is not considered homogeneously in Europe. There are places - and authors - that have a more articulated critical transfeminist approach (e.g., Preciado in Spain, but also Katarina Bonnevier and Brady Burrough in Sweden, and others); generally speaking, this approach is often viewed with distrust.

This essay seeks to highlight how such an approach is not destructive, but that it is a critical and useful approach in order to imagine and design buildings and cities for everyone, because «not only [...] architecture express the social collectivity, but [...] it had the power to shape social relations»[36]
In this sense, a few words that transfeminism has helped to give updated meaning will be highlighted.

4.1. Social
In his book, Adrian Forty talks about the social role of architecture highlighting how «the description of the social had been less of a problem in the nineteenth century, mainly because architects and critics had had fewer aspirations for a 'social' architecture»[37]. He demonstrates how the aspiration of improving people's lives through architecture was, somehow, betrayed, and how, in the end, the social was only articulated as the expression of productive labour. In the last part of his essay, the author states that «in the attempts to describe the 'social' aspects of architecture, language has let architecture down. Language's particular strengths – the creation of differences – has been of limited value in this domain; while the task of making evident a relationship between two such utterly disparate phenomena as social practice on the one hand and physical space on the other has proved to be largely beyond the capacity of language».[38] It might be argued that this is something that can be challenged by transfeminism: as stated before, the intersectional approach of transfeminism allows to finally see several axes of oppression and to challenge the heteronormativity of space, putting in light the differences, and this is done because there is a need to question the concept of having great architectural figures, great projects, and capitalism in general: there is a great urgency, on the contrary, to focus on the needs of people on the margins, to recover disused buildings, to guarantee housing justice for all, and to question the ways in which cities have been designed and built up to now. The ultimate need is to design a feminist city. How is a feminist city?

In this sense, Preciado argues that in 1972, the *Front homosexuel d'action révolutionnaire* denounced the danger that «gay identity politics will accept the liberal logic where existence and political representation mean the right to consumption and media visibility».[39] According to Preciado, «the anti-identity paranoia of the FHAR can today be considered the lucid diagnosis of an ongoing political mutation».[40] The FHAR years (1980-'90) are the same years in which globalist and liberal strategies can be understood and legitimized as forces for democratizing the world; there can be no queer revolution without a revolution of the patriarchal capitalist system. Those huge private urban and architectural projects that favour a neo-liberal economic model adhere to capitalist economic logics that, as we shall see, betray the need for the individual to redefine new forms of subjectivity in a system that

is ready to abandon old superstructures of power with the aim of creating new ones, within a global village in which the *politics of affinity* prevails. In these types of built environment, one may wonder who this is created for and for which type of body.

4.2. Body
When designing a building, a series of figurines, more or less detailed, are placed within the project, which should populate the environment one wants to build: the users, the final recipients, the occupants. Without going into too much detail, here it is possible to well on another word that transfeminism and queer studies have developed and focused on, especially in relation to space - and thus built space - namely the body. Thinking about bodies allows to think about what is real, physical, and touchable. In this sense, contemporary art works, especially related to performance art, that precisely investigate the relationship of the body with space, including architectural space, can be useful.[41]

Furthermore, the concept of *housing justice* mentioned before can be analysed through a transfeminist and intersectional approach to architecture, as to include in architectural projects other subjects other than white middle-class families. Then, using the same approach, the analysis of the body in relation to the urban space is fundamental because the place of the body, « [...] precisely because of the body, alludes to making visible issues that have to do with rights, inequalities, time, memory, and its transmission. In this sense, the place of the body is a political place».[42] Furthermore, if technology is the prosthesis of the body,[43] then the body is not a biological element, but a «field of inscriptions of socio-cultural codes: it stands for the radical materiality of the subject, which is defined above all in relation to technology».[44] At this regard, what bodies are we building and what system of social organization of sexual difference and the sexual body?[45]

4.3. Genius/Privilege
In history, there has been constant reference to the concept of *genius* referring to certain artists, architects, and scientists: Leonardo Da Vinci was a genius, Caravaggio and Bernini were geniuses, the genius of the painter, the genius of the artist, and so on. Without wishing to diminish the greatness of painters, artists and scientists who have marked Western history, the concept of genius has been challenged in recent years, with the emerging of the second-wave feminism in the mid-20th century. To do so, the concept of *privilege* was analysed, to which we owe much to Black Feminism with respect to, for example, the analysis of white privilege. The concept of genius and greatness, in art and architecture as in science, has been part of - and still is part of - a 'tradition', a repetition of norms and taxonomies, of practices that have consolidated a *school*, which are not natural or the result of human spontaneity, but the result of classifications and systems of domination that have survived until now.

Why have there been no great women artists? is the title of a 1971 essay by Linda Nochlin, which answers the question of questions. The text is effective because it does not limit itself to a list of female artists of the past who have left their mark. The author, starting precisely from the concept of genius, demonstrates how this category is inscribed in a masculine system of evaluation, and argues that art is not a personal expression of an individual's emotional experience, but is instead the correct mastery of a coherent formal language, learnt and developed through study and practice.[46]

Regarding the concept of genius, the construction of the narrative around the artist played a role, which according to Nochlin has its basis in a certain cultural mindset that was passed on, whereby the myth of the artist with supernatural qualities and precocious talent of the 14th century, or the myth of the cursed artist of the 19th century, was constructed.[47]

Great artists were able to become great if they painted scenes of activity, such as battles or fights, with bodies - preferably naked bodies. They therefore had to fit into an institutional system in which there was a scale of values that decreed the most important type of art. Then if the artists were born into families of artists, they could have had the support of their families (most of the great artists of the past were part of artist families). In addition, women were rarely allowed to pursue the arts except as a pastime and until 1893 they were prohibited from depicting nude subjects - while women are always nude when painted.

Therefore, Nochlin claims that the flaw in these women's lack of greatness lies in their education and in the conditions of art production: in short, in the lack of the privilege of being a bourgeois man, coming from a family of artists, born in the correct sociocultural context that supports it in its evolution.

In order to ensure that things are not studied by only a few people, done by a few people for the benefit of a few people, it is necessary to unravel the dynamics of privilege that only privilege a few individuals. We must 'shift the centre', where the centre means the norm, a fixed scale of values and a seemingly natural power structure.

6. Conclusions
Some elements have been given, both historical and semantic, to understand how architecture language is complicit in normalising and crystallising gender binarism, going from classical forms to those of modernism.

A list of words and concepts that have taken on different values due to the philosophical and scientific contribution of feminism and queer studies have been presented. There would be many others to address, such as the concept of *nature* linked to that of the *environment*, a theme that is relevant to transfeminism and class struggles. A topic also closely linked to those of architecture and urban studies, given the need to address a present climate challenge.

The words *community*, linked to the word *care*, are also important for the analysis of urban space related to transfeminist studies. The collectivization of spaces and the need not to be single individuals occupying assigned spaces, but to be, to live and to make community, to reclaim abandoned spaces, are other important topics and words.

However, let's conclude this essay with two more words, *architectural flirtation*.

Abundant feminist and queer literature deals with the theme of privilege, the margin, the shifting of the centre, the change of gaze. Applying these ideas to architecture, urbanism, and the study of space in general is not a simple matter. One of the most original proposals is the strategy, described by Henry T. Beall, Brady Burrough, and Beda Ring, of *Architectural Flirtation*.

First, the authors affirm the importance of interdisciplinary work, which underpins the critical study and supports the social cause and takes on a political value.[48]

Regarding the term *architectural*, it is a statement of intent, a feminist positioning of oneself in a specific field of investigation, which carries with it a critical scope: «it is directly associated to the discipline we intend to affect, Architecture – with a capital A (to signify a self-perpetuating patriarchal discipline and canonical culture that is in need of change), and because my co-authors and I recognize the inherent association with power, we choose strategically to call any and everything we do *architectural*» and «contemporary feminist practitioners interested in architecture cannot afford to give up the term *architectural,* if the intention is to change it».

The term flirtation is stolen by the authors from Gavin Butt when he speaks of scholarly flirtation: «both Architectural and Scholarly flirtations are similar in their intent to undermine the reproduction of power within serious or traditional subjects, and/or approaches to these subjects, through an act of queer scholarship that is purposely improper and contingent». [49]

Flirting is a risky act, and it is not necessarily successful. Questioning the norm involves playing with its seriousness, and making it falter, shifting it from the centre, relying on a Camp mindset and sensibility: «the essence of Camp is its love for the unnatural: of artifice and exaggeration».[50] Camp «converts the serious into the frivolous»[51], however, it is not superficial. In the book, the authors give several examples of what they mean by architectural flirtation, that comprehends fictional stories, letters written to architects, drawings, posters, photographs, workshops, creative writing, poetry, and so on.

There is urgency to rethink the way in which the institutions transmit knowledge, reflecting on what kind of norms are reproduced and how they contribute to forming exclusionary spaces. In this sense, flirtation is situated, which means that is particularly referred to a specific field of knowledge and has its maximum efficacy in the context of pedagogy. An interesting example of architectural flirtations are the fanzines edited by Brady Burroughs and realised with her students on the specific connection of the students' practice and a specific feminist author.[52]

Notes

1 Frederika Eilers, "Barbie versus Modulor Ideal Bodies, Buildings, and Typical Users", *Girlhood Studies* (2012), 76-97.

2 Corrado Del Bò, et al, *City Policies (*Pisa: ETS Editions, 2020), 5.

3 Mark Wigley, "Untitled: The Housing of Gender", in *Sexuality and Space,* edited by Beatriz Colomina *(*Princeton Architectural Press, 1992), 327-389.

4 Adrian Forty, *Words and Buildings: A Vocabulary of Modern Architecture* (London: Thames & Hudson, 2004), 11-14.

5 Beatriz Colomina is an internationally renowned historian and architectural theorist. She is interested in and publishes research on architecture, art, technology, sexuality and media issues. She is director and founder of the interdisciplinary Media and Modernity program at Princeton University and professor and director of Graduate Studies at the School of Architecture.

6 Beatriz Colomina, "Introduction", in *Sexuality and space (*New York: Princeton Architectural Press, 1992).

7 Linda Nochlin, *Why Haven't There Been Great Female Artists? (*Rome: Lit Editions, 2019).

8 Beatriz Colomina, "Introduction".

9 Adrian Forty, *Words and Buildings*, 43.

10 Ivi, 44 – 51.

11 Ivi, 44 – 45.

12 Ivi, 51.

13 Ivi, 56.

14 Ivi, 57.

15 Paul B. Preciado, *Pornotopia. Playboy: architettura e sessualità* (Roma: Fandango libri, 2020), 14 – 15.

16 Paul B. Preciado, *Pornotopia*.

17 For example, Giedion contrasted the decadent *Playboy Architecture* with the traditional, modern, and chaste architecture of Le Corbusier's *La Tourette Monastery* (1959). Paul B. Preciado, *Pornotopia,* 198.

18 It is possible to find many examples in this sense. One of the most interesting ones regards Zaha Hadid, as it is possible to see in this article, where the Al-Wakrah stadium in Qatar is compared to a vagina: Tomas Jivanda, "The Accidental Vagina Stadium: Design for Qatar's first 2022 World Cup purpose-built stadium released", *Independent*, 2013. https://www.independent.co.uk/news/world/middle-east/the-accidental-vagina-design-for-qatar-s-first-2022-world-cup-stadium-released-8947447.html There are many exaples on Hadid reported in this article: Silvia Calderoni, "Lettura transfemminista queer dell'architettura e della progettazione urbana", *Kabul Magazine*, 2022, https://www.kabulmagazine.com/wp-content/uploads/2022/07/Lettura-transfemminista-queer-dellarchitettura-e-della-progettazione-urbana_Kmag.pdf

19 Beatriz Colomina, *Privacy and Publicity: Modern Architecture As Mass Media* (Cambridge, Massachussets: MIT Press, 1996).

20 Beatriz Colomina, *Privacy and Publicity.*

21 Ivi, 238.

22 Ivi, 293.

23 Erving Goffman, *Gender Advertisements* (New York: Harper and Row Publishers Inc, 1976), 111.

24 Beatriz Colomina, *Privacy and Publicity,* 296.

25 Ibidem.

26 Judy Wajcman, *Feminism Confronts Technology (*Cambridge: Polity, 1991).

27 Phil Hubbard, "Here, there, everywhere: the ubiquitous geographies of heteronormativity", *Geography Compass* 2, no. 3 (2008): 640 – 658.

28 bell hooks, *Feminist Theory: From Margins to Center* (Cambridge: South End Press, 2000).

29 David Bell, Valentine Gill, *Mapping Desire* (Routledge, 1995).

30 Nancy Duncan, *Body/Space. Destabilising Geographies of Gender and Sexuality* (London: Routledge, 1996).

31 Rachele Borghi, *Decolonialità e privilegio, Pratiche femministe e critica al sistema-mondo* (Meltemi Editore, 2020).

32 Phil Hubbard, "Here, there, everywhere".

33 Jack Halberstam, "Technotopias", *In a Queer Time and Place: Transgender Bodies, Subcultural Lives, Sexual Cultures* (New York/London: New York University Press, 2005).

34 Henry T. Beall, Brady Burrough and Beda Ring, *Architectural Flirtation. A love storey* (Stokholm: Gullp Press, 2016), 49.

35 Sarah Ahmed, *Willful Subject* (Durham and London: Duke University Press), 50.

36 Here Adrian Forty quotes Bruno Taut in Adrian Forty, *Words and Buildings, 108*

37 Adrian Forty, *Words and Buildings*, 103

38 Ivi, 117

39 Paul B. Preciado, *Terrore anale. Appunti sui primi giorni della rivoluzione sessuale* (Roma: Fandango Libri s.r.l., 2018), 58.

40 Ibidem.

41 In this sense, post porn performances (with Rachele Borghi, Diana Torres, and others) are a great example of investigation of urban space within the field of sexuality.

42 Cristina Bianchetti, *Corpi tra spazio e progetto (*Sesto San Giovanni: Mimesis, 2020) 137.

43 Marshall McLuhan, *The medium is the massage (*Milan: Corraini, 2011).

44 Rosi Braidotti, "Introduction", in *Cyborg Manifesto: Women, technologies and biopolitics of the body,* by Donna Haraway *(*Milan: Feltrinelli, 1995).

45 Ibidem.

46 Linda Nochlin, *Why Haven't There Been Great Female Artists?,* 23.

47 Ivi, 32

48 Henry T. Beall, et al., *Architectural Flirtation,* 46.

49 Ivi, 50.

50 Susan Sontag, "Notes on camp", *Against Interpretation* (New York, London, Toronto, Sydney, Auckland: Anchor Books Doubleday), 1.

51 Susan Sontag, "Notes on camp", 2

52 Brady Burrough, *Ahmed for architecture students* (Stokholm: KTH, School of Architecture and Building Environment, 2019).

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Biography

Silvia Calderoni is an independent curator and researcher and has explored the study of public space from a queer transfeminist perspective. After an MA at the University of Sussex (Brighton) in Art History and Curating with Queer Studies, she attended the MA in Gender Studies and Policies at the University of Roma Tre and is currently a student of the Master Città di Genere on the intersection between urban studies and feminism at the University of Florence. She co-founded Parsec, a research space on contemporary art in Bologna, and works with the British School at Rome. She is a member of the scientific committee of CIRSDe - Interdisciplinary Centre for Research and Studies on Women and Gender, based in Turin, Italy.

Visions on *Democratic Architecture*

Carvalho, Cássio[1]; Alegre, Alexandra[2]
1. Universidade de Lisboa, Lisbon School of Architecture, CIAUD - Research Centre for Architecture, Urbanism and Design, Lisboa, Portugal / Universidade de Lisboa, Instituto Superior Técnico, CITUA, Lisboa, Portugal, cassiolucena@hotmail.com
2. Universidade de Lisboa, Instituto Superior Técnico, CITUA, Lisboa, Portugal, alexandraalegre@tecnico.ulisboa.pt

Abstract

Through the interpretation of the term democracy discussed by relevant authors/architects written at different times, the article explores the meanings of the relationship between this concept and architecture. After analysing the syntactic and semantic correlations between these two words, we explore the use of the term democracy to qualify architecture: democratic architecture. The analysis of selected texts by various authors reveals the semantic evolution of this concept.

Frank Lloyd Wright ("When Democracy Builds", 1945) stated that organic architecture is the architecture of democracy. This concept of organic architecture reflects life. It is something built to serve man and not to dominate him. Ralph Erskine ("Democratic Architecture", 1982) extended the idea, emphasizing resource efficiency, user participation and social inclusion. Architect's role should promote human rights and facilitate interactions among diverse groups.

In the 21st century, authors like Joan Ockman ("What is Democratic Architecture?", 2011) and Jan-Werner Müller ("What (if Anything) is 'Democratic Architecture'?", 2020) have emphasized the importance of adaptable spaces for democratic practices and the need for architecture to follow the evolution of society's norms, identities and needs. A common theme emerges in their writings: democratic architecture should avoid spectacle-driven designs or symbolic representations of democracy. Instead, it should prioritize inclusivity, flexibility, and responsiveness to societal changes.

The concept of "democratic architecture" has evolved, reflecting the evolution of democracy itself. Just as democracy is an unfinished project, democratic architecture must remain adaptable and open, reflecting the dynamic nature of democratic processes. The role of the architect is central, promoting community involvement, socially and environmentally sustainable practices and cultural preservation.

The concept of democratic architecture thus continues to develop, incorporating contemporary challenges and aspirations in the construction of fairer and more inclusive societies.

Key words: Democratic Architecture, Architecture and Democracy, Architect's Role in Democracy, Spaces for Evolving Democracy.

1. Introduction – Democracy. Popular sovereignty

Democracy is a political system characterized by the fundamental principle of popular sovereignty, which allows for active citizen participation in governmental decision-making. According to the American political scientist Robert Dahl[1], the term "*Demokratia*" was coined by the Athenians: "*Demos*" means the people, and "*Kratos*" means to rule. In 507 BC, the Athenians adopted a system of government that enabled popular participation by a significant number of citizens. Athenian democracy was established during the tenure of Cleisthenes in 514 BC through a series of reforms aimed at increasing popular participation in politics. Cleisthenes' reforms were responsible for the birth of democracy as a system that expanded popular political participation.

However, Athenian democracy had its limitations. Women, foreigners, and enslaved people were not granted the right to participate in politics, which meant that popular participation was still restricted to a part of the population. Despite its limitations, Athenian democracy was a significant advancement compared to other political systems, such as monarchies and oligarchies. The example of Athens influenced other governments in ancient Greece and the Western world and is considered a milestone in the history of politics and democracy.

According to Philippe C. Schmitter and Terry Lynn Karl (1991), like any regime, democracies also depend on the existence of rulers, that is, individuals who hold positions of authority and can issue legitimate commands to others. However, what distinguishes democratic rulers from non-democratic ones are the norms governing how they attain power and the practices that hold them accountable for their actions. In a democratic regime, rulers are freely and equally chosen through regular elections, in which all citizens have the right to vote and be voted. Additionally, rulers are held accountable for their actions and decisions, subject to norms and procedures that aim to ensure transparency, accountability, and respect for individual rights and freedoms.

In the democratic experience, the concepts associated with the freedom of the people go beyond a simple form of government and become ideas that permeate the routines and interactions among citizens. The idea of democracy is related to the notions of pluralism, inclusion, and civic participation, such as the right to freedom of assembly, freedom of expression, freedom of thought, conscience, and religion. Although it is a government of the people, chosen by the majority, it is a system that also respects and safeguards the rights and needs of minorities.

In 1863, following the victory in the Battle of Gettysburg, which was decisive in ending the American Civil War, President Abraham Lincoln (2009) delivered an important speech that is still recognized as a milestone for the consolidation of democracy as it is known today. In the famous Gettysburg Address, Lincoln invoked the principles of freedom and equality and solidified the idea of a "government of the people, by the people, for the people".

Since then, democracy has been consolidating as the primary alternative form of government to guarantee individual freedom and equality among citizens. In general, contemporary democracy has managed to reconcile different interests, beliefs, and positions, thus ensuring a minimum consensus for the administration of collective life. Nevertheless, preserving the democratic rule of law has been one of the great struggles in the Western world.

2. Selected Texts - Democratic Architecture. Architecture for the People

Analysing the syntactic and semantic relationship adopted to correlate the terms architecture and democracy is essential to understand better how the topic will be approached in this article. Throughout the text, the terminology "Democratic Architecture" has been adopted as the best way to establish the search for a type of architecture that, in its conception and appropriation, enables specific forms of use. Through this syntactic organization, the word "democratic" functions as an adjective that qualifies the noun (architecture), giving it more precise characteristics, a specific delimitation, and the desired characterization. In other words, "democratic" defines a particular quality of the architecture to be addressed.

A preposition would also be expected to establish the relationship between the noun or pronoun and the other element of the sentence. Prepositions are function words that come before a noun to create a prepositional phrase. For example, prepositions and objects can express time, location, or direction. This would be the case if phrases like "Architecture in Democracy", "Architecture of Democracy", or "Architecture for Democracy" were being used. However, it is emphasized that these would not be the desired associations and formats for linking the two terms because, as mentioned, what matters most are the qualities that democracy can attribute to spaces.

In any case, regardless of the syntactic and semantic organization, it is rather challenging to determine when the themes of architecture and democracy began to be related. During the post-World War II reconstruction period, many architects and urban planners dedicated themselves to projects that aimed to create more just and equitable societies, using architecture and design as tools for social transformation. One of these architects was the American Frank Lloyd Wright, who published his classic book "The Disappearing City" in 1932, proposing the organization of a dispersed territory for a decentralized society. This theme continued to be a subject of reflection for Wright, who, in 1945,

published the book "When Democracy Builds". His interest in the topic persisted until the end of his life and was further portrayed in publications such as "The Living City" in 1958 and "The Industrial Revolution Runs Away" in 1969, which was a special re-edition of "The Disappearing City", which presented a revised and updated version by Wright himself.

The book "When Democracy Builds", printed in 1945 when the Allies declared victory in World War II, was one of the first efforts to establish a clear and direct semantic relationship between architecture and democracy. The publication was in charge of the University of Chicago; however, Wright's literary qualities and the work's bombastic, utopian, and unscientific nature were widely criticized, contributing to the limited impact of the ideas propagated in the book at the time. Also criticized was the lack of examples of the time, considering the book outdated. According to Arthur C. Comey (1945), it was a pity that this great architect tarnished his brilliance by engaging in mere political propaganda. Comey states, "There is no evidence of the impact of the rapidly developing ideas of other designers in this field during the past decade. Apparently, Wright worked alone."[2]

Nevertheless, almost 80 years after that publication, it is believed that revisiting some of Wright's ideas can help shed light on the paths taken by democratic architecture up to the present day. In the book, Wright argues that architecture should express democracy and reflect society's values[3]. He argues that architecture should not only be functional but should promote happiness and freedom of individuals. Furthermore, Wright states that architecture should be in harmony with nature and respect the environment. For him, "organic architecture" would be the architecture of democracy, built to serve humankind rather than dominate it.

> What is this idea we call Organic Architecture? Why do we call it the Architecture of Democracy? Simply because it is organic law understood and intelligently applied – spirit given appropriate material form. Simply, too, it is the structure of all of life seen by man as various forms of architecture. As an idea, democracy sees the enlarged means of today intelligently turned about to employ machine power and the new super-materials for the man himself. Therefore, organic architecture is an architecture not satisfied to make more money when money stacked again the man.[4]

In the 1930s, Wright put these concepts into practice through the "Usonian Houses", housing designed for the American lower-middle class. During this period, in the United States, there was a significant increase in migration of the rural population to the cities. However, the scarcity of housing compatible with the financial capabilities and needs of these migrants led to the development of new residential areas in suburban zones. The "Usonian Houses" aimed to address this problem and differed radically from traditional American houses, which followed a "Victorian" inspired model. Instead, Wright sought to revive an American architectural tradition, an architecture free from the legacies of old European historical styles. According to Robert C. Twombly (1979), for Wright, American architecture should reflect the great democracy that the country represented and be an expression of that truth. If the country was genuinely formed by the composition of various world nations, without being subordinated to any, its architecture should be free from historical references, as new and different as the country itself.

Thus, the "Usonian Houses" were supposed to reflect the American landscape and lifestyle. The spaces were organized horizontally through a series of floors arranged at different levels without material or visual obstacles. The idea of continuity was emphasized through less compartmentalized interior spaces, organized from plans that often extended beyond the house, promoting a connection between inside and outside. Large transparent planes provided ample natural lighting and reinforced the integration with nature. In general, Wright believed that architecture was a means to transform society and proposed a new type of democratic architecture that promoted cooperation and citizens' participation in building their own communities. He believed that architecture should be adapted to local and cultural needs and that architects should work closely with communities to create buildings and public spaces that meet the needs of all.

Later in time, another architect correlated and acted in favour of a more democratic and humanistic architecture, the British Ralph Erskine, who won the RIBA Royal Gold Medal for Architecture in 1987. Erskine graduated from Regent Street Polytechnic in London in 1938 and, shortly before the start of World War II, moved to Sweden. Here, he designed a wide range of buildings, from houses to schools, apartment buildings, and urban plans. Erskine gained professional recognition for his experiments in designs that prioritized user participation and environmental compatibility.

> I therefore make a plea for an alternative philosophy, for *brukskonst* - the art of that which is useful - a plea, that is, for poetry and beauty created out of the realities and true needs of a disturbing world, for an architecture which expresses our dreams of a more just society and the inspired promises in our declarations of human rights.[5]

For Erskine, architecture is the art of communities. In 1982, during a public presentation at the English Department of the Environment, Erskine gave a lecture entitled "Democratic Architecture - The Universal and useful art: Projects and Reflections" in which he shared his experiences and personal reflections built over years as an architect in Sweden. According to Erskine, there are four

unacknowledged and powerful generators of architectural change: democratic participation in decision-making processes, minority rights, economy in energy use, and economy in the use of resources.

Erskine believes that achieving democratic environments requires the participation of people with architects. "The 'user-client' brings new insights and evaluations which can fundamentally differ from those of the traditional 'sponsor-client'"[6]. He also emphasizes the change in how spaces are designed to meet the needs of children, the elderly, immigrants, and other subcultures and minorities. The form and aesthetics of the building should incorporate elements such as elevators and ramps necessary for the independent movement of people with special needs.

The issue of energy efficiency and resource use is another condition for this change in democratic architecture thinking. Erskine strongly criticizes large, glazed buildings, warning that they represent a naive and irresponsible form of culture from the perspective of energy conservation concerns. For him, architecture can and should be a protector, a modifier, a mediator, and a fundamental instrument in addressing issues related to climate impact.

Regarding the conscious and responsible use of resources, he emphasizes that this is not just a technical and utilitarian issue, but a fundamental issue of human rights, considering that in a world of limited resources, these cannot be unequally distributed among classes, races, and nations.

Jan-Werner Müller (2020), in his text "What (if any) is 'Democratic Architecture'?" addresses how certain decisions in the planning of the built environment, its procedural and substantive arguments, can facilitate democratic politics. Müller corroborates Michel Foucault's argument (2014) when he points out that architecture is an element of power apparatus and a field of visibilities in that he also understands the political dimension of the built space, believing that it can coerce and enable, aggregate, or segregate, and make us move in specific ways and block others. Müller states that architecture is "deeply connected to the dynamics of association and dissociation; it also makes some things visible and others invisible; it is involved in the creation of subjectivity and intersubjectivity"[7].

In the exercise of relating architecture and democracy, Müller proposes an analysis that does not attempt to apply definitions of democracy to architecture but alternates between reflections on architecture and understandings of democracy. In this line of thought, he highlights the importance of perceiving the difference between spaces that represent democracy and those that facilitate honest democratic practices. For the author, the democratic space, in essence, should not be entirely predetermined and programmed and should allow open processes that enable uncertainties, contestations, and the growth of new ideas.

> Democracy is institutionalized uncertainty; its procedures—based on freedom and equality—can produce highly divergent outcomes. Public spaces should ideally reflect this open, undetermined character of democracy: they should not be over-programmed pedagogical spaces where democratic values are represented but can hardly be practiced. Instead, they should do justice to democracy's dual character and enable democratic opinion formation alongside, and sometimes against, formal institutions of decision making.[8]

It is, therefore, essential to prevent projects that propose symbolic associations or allusions to democratic values from being understood as models of democratic architecture. Usually, in these projects, representations of democratic values and other metaphors suggested by architects are so distant from the user's daily references and concerns that they find no place to resonate. They are not understood or directly relevant to those who will use the space and, therefore, do not affect the experience of the place. In truth, democratic architecture does not lie in a rigid organization and arrangement to be imposed on the user. Nor is it in the specification of one or another type of construction element or in the application of one or another type of ornament in its construction. As the historian and architectural critic Joan Ockman (2011) aptly stated in her article "What is Democratic Architecture? The Public Life of Buildings," even in an era of digital communications and e-books, "the practices of citizenship continue to have their most vivid enactment in real places. Moreover, these places will seem welcoming or inhospitable, ennobling or degrading, stimulating or deadly, liberating or oppressive due to their spatial attributes"[9]. In fact, democratic space lies in how the user relates to different forms of content.

Ockman strongly criticizes architecture that aims to be a spectacle. She denounces that the current media environment has led to the emergence of spectacle buildings conceived to be authentic urban attractions. "The current architectural spectacle is a highly engineered system of control that seduces with scintillating surfaces"[10.] This architecture succumbs and intertwines with economic interests and a capitalist and consumerist dynamic that demands pseudo-renewal to attract audiences, attention, and resources continuously. However, according to Ockman, the architect must be vigilant to avoid uncritically reproducing these dynamics and eventually overcome them since, paradoxically, just as they generate popularity, they also result in emptiness. According to the author, such buildings are contrary to and incapable of producing democratic spaces.

The ideological ambiguities that surround democratic claims by architects point not only to the difficulties of translating political concepts into three dimensions but also to the historical instability of the term democracy itself, which, despite its symbolic value, has frequently amounted to a hurrah word or a safe-conduct pass.[11]

3. Development - Analysis, correlations, and points of contact

Based on the reading of the four texts, which explore the relationship between architecture and democracy, we move on to the analysis of how these terms/concepts were defined at different times by different authors. The aim is also to evaluate if there were points of contact in the definitions given by each author.

As a starting point, it is necessary to frame the points of view in the concerns/circumstances of each author's time, considering the historical context and socio-political issues that framed each text.

Starting with Wright, it is clear to understand his desire to point out architectural and urban solutions as a way out of the difficulties of the United States during the Great Depression and the New Deal era. Kenneth Frampton (2017) states, "Wright believed, as few have either before or since, that architecture was a crusade on behalf of human civilization rather than a mere profession."[11] Thus, he advocated that only a radical change and one that considered architecture, would allow the United States to restructure itself and regain its former energy and direction. The context of Wright's 1945 text, combined with his strong personality, conforms to a concern and a much more revolutionary, controversial, and political stance than the other texts analysed. In this sense, Wright's description of democratic architecture reflected his concerns with preserving the United States' position as a significant democratic power and with the economic and social policies of the time. Thus, the concept of Organic Architecture, which underpinned the discourse of a democratic future through the Usonian City, was linked to the will to provide quality housing for all people, regardless of their socioeconomic background, but also strongly tied to a nationalist discourse.

In the 1980s, from a global perspective, concerns revolved around geopolitical and military tensions and the risk of nuclear war resulting from the Cold War. During this period, issues related to climate change and awareness of resource preservation began to gain strength, significantly impacting world public opinion following the Chernobyl nuclear accident in 1986. Sweden, the country where Erskine built a significant part of his career, is the world leader in nuclear energy production per capita. Since then, efforts have been made to promote diversification of the energy mix by encouraging the development of renewable energy sources. It is also important to note that the United Nations Conference on the Human Environment took place in Stockholm in 1972, and the Kyoto Protocol, an international agreement to combat climate change, was adopted in 1997.

Considering this scenario, the association between democracy and architecture, as depicted in Erskine's discourse, highlights concern with environmental issues and building performance. The issue of economical use of resources and energy is a substantial concern. In addition, Erskine strongly focuses on combating what he identifies as "exotic" architectures - large glazed corporate buildings that reflect inequality and exclusive privileges to him. Architectures that "betray the humane and democratic beliefs and dreams of our culture"[13]. Also of great concern was the promotion of user participation in the design decision-making process and the need to adapt spaces for minorities, especially people with physical disabilities. This was also a very latent issue in Europe from the 1960s onwards, culminating in the enactment of the Disability Discrimination Act (DDA) in the United Kingdom in 1995, which established a legal framework to ensure that disabled people were not treated discriminatorily in various areas of life, including housing.

Thus, in this late 20th-century context, the approach to the concept of Democratic Architecture proposed by Erskine occurred in a less pamphlet-like manner if compared to Wright's approach. The focus is also on more pragmatic issues, such as human rights and climate impact, presenting fewer utopian interpretations but strongly connected to a European context.

Moving towards the 21st century, the texts by Joan Ockman (2011) and Jan-Werner Müller (2020) add new layers that closely relate democratic architecture to flexibility, freedom, and the possibilities of space appropriation. It is undeniable that, nowadays, new movements have emerged in favour of social and political changes that fight for equality and the recognition of diverse identities. Issues related to LGBTQ+ rights, anti-racism, environmentalist, and social justice agendas have become part of current public policy discussions, and inevitably, these concerns resonate in the visions that link democracy and architecture. Besides adopting a more globalized perspective, both discourses add a new meaning to democratic architecture, which refers to its incompleteness in the sense of not being a closed, fully pre-programmed space. Currently, allowing spaces to be appropriated in unforeseen ways is also a spatial quality to be sought for a more democratic appropriation. Legitimizing this contestation and re-signification of spaces represents the very representation of the fluid and impermanent nature of democracy.

A strong point of contact in the texts and concepts analysed is the aversion to the spectacle/monument building, which only tries to reflect, metaphorically, democratic practices without,

in fact, supporting them. Criticism of a society centred on the ostentation of wealth permeates the entire chronology studied. Another common point is the defence that democratic architecture should make visible and include marginalized or forgotten segments of society, addressing issues of accessibility and social equality.

In the 21st-century discourse on democratic architecture and new concerns, climate change and sustainability issues are intensely reinforced, as they are among the most urgent agendas of this historical moment. Another new topic, which did not appear in previous debates, relates to combating digital inequality. Not all people have equal access to high-speed internet, electronic devices, or the digital skills needed to take full advantage of online resources, and this creates a digital divide and deepens social disparities and inequalities. Ensuring that democratic spaces include measures to promote digital inclusion and democratize access to the internet has also become a concern.

In this way, it is evident that new ideas emerge in the sequence of time in response to different historical events and the development of Western civilizations. It can be said that the concept of democratic architecture has been growing and accompanying the maturing of democratic states. This concept has become denser, acquired new facets, and reorganized itself as a concept of values. This mutable dynamic is at the very core of the concept of democracy. Thus, it is desirable and expected that this construction in architecture also occurs continuously and permanently.

4. Final Considerations

The evolution of the concept of democratic architecture reflects the changing nature of democracy itself, intertwined with historical contexts, social concerns, and changing perspectives on human rights and inclusivity. By examining the political significance of this concept across the selected texts, the term "democratic architecture" has gained semantic precision since its first usage by Frank Lloyd Wright. Each author has contributed to an ongoing discourse on how architectural spaces can embody and facilitate democratic principles.

Wright's visions from the mid-20th century sought to reinvigorate a nation through architectural transformation based on the concept of Organic Architecture that embraced democratic values by harmonizing with nature, ensuring accessibility for all and spaces designed according to the needs and aspirations of a diverse population. Erskine extended the concept to include resource efficiency, user participation and social inclusion in a time marked by heightened environmental consciousness and social change. His emphasis on the role of architecture in promoting human rights and fostering interactions among different groups demonstrated a commitment to democracy that transcended mere aesthetics. In the 21st century, Ockman and Müller underscored the significance of flexible, adaptable spaces capable of accommodating democratic practices that exceed the conventional boundaries of formal decision-making institutions. Their viewpoints emphasised the dynamic nature of democratic processes and the need for architecture to adapt to evolving societal norms, identities and needs.

Throughout this evolution, common threads emerged. As a political system democracy is an unfinished project. It is not given or guaranteed; it requires care and continuous remodelling. Recent years have witnessed various challenges that have profoundly impacted the global democratic landscape, triggering apprehensions about its vitality and resilience: the rise of authoritarianism and populism, disinformation, migration and xenophobia, digital privacy and surveillance concerns, globalization, and economic inequality. Global levels of democracy have regressed to their lowest point since 1986. Alarmingly, the number of countries categorized as autocratic has exceeded that of full democracies for the first time since 1995 indicating that global levels of democracy have regressed to their lowest point since 1986.

Similarly, democratic architecture must remain attentive to societal changes and demands. It should be open and impermanent, mirroring the nature of democracy itself. A mutable architecture in constant evolution and permanent construction. Constructions that ease citizens to build and express their ideas and ideals.

As a valuable exercise, we can reflect on the challenges confronting this topic and the values and principles applicable to the democratic spaces of the future. It is crucial to remain vigilant against the pitfalls of spectacle-driven and signature-based buildings and question the architect's role. Ockman (2011) warned against the dangers of self-indulgent and presumptuous architecture. Democratic architecture must resist the temptation of being the result of an over-controlled and individual act representing a restricted and singular vision. It should not seek self-sufficiency, supported by labels of authorship, nor should it be closed, predetermined, or over-programmed.

The texts emphasize the architect's responsibility in designing the physical environment that shapes society. Architecture is not a passive backdrop but a dynamic force that, depending on how it responds to the challenges of its time, can either support or hinder democratic values. The call for a deeper engagement with communities, a recognition of the complexities of human interactions, and the allowance for spaces to evolve in response to democratic practices underscores the evolving role of architects in democratic societies. Engaging communities, stakeholders, and users in the decision-making process is essential, achieved through participatory and collaborative design processes where

trust among participants should always be encouraged. The essence of democracy lies in sharing, collective efforts, and embracing diversity, values that should be embraced in the construction of a democratic space. Listening, sharing, and compromising are essential components, surpassing imposition to achieve genuine democracy. These values must guide decisions concerning enduring social and environmental sustainability and the preservation of local culture, reflecting an alignment with broader global concerns and providing environments that support and sustain the democratic system.

The place of metaphor and symbolic references as guarantors of a democratic experience in spaces should also be challenged. Müller (2020) alerts us to the difference between representing democracy and facilitating real democratic practices. Spaces that simply organize representations and glorifications of democratic values, often incomprehensible to users, may not necessarily address issues of equity and the inclusion of marginalized voices, accessibility for all, and the recognition of diverse identities.

The term "democratic architecture" has progressively acquired greater semantic precision, deeply linked to the historical and socio-political circumstances of each era. In today's debates on issues of equity, climate change, digital inclusion, the challenges of artificial intelligence and cultural diversity, the concept of democratic architecture remains relevant and constantly evolving. The challenges and transformations that democracy faces are also faced by the built environment that reflects its values and aspirations. The ideas expressed by the authors in different periods are representative of the ongoing search for how architecture can incorporate and enable democracy in the pursuit of fairer, more inclusive and sustainable societies.

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Biography
Cássio de Lucena Carvalho, Ph.D. in Humanities and Arts at the University of Rosario / Argentina, emphasizing Educational Sciences. He is also a Ph.D. candidate at the Faculty of Architecture, University of Lisbon, and a collaborating researcher at the Centre for Research in Architecture, Urbanism, and Design (CIAUD). Research fellow within the project "THE (RE)DESIGN OF THE LEARNING ENVIRONMENT. What is changing?" proposed by the Centre for Innovation in Territory, Urbanism and Architecture (CiTUA) at the Instituto Superior Técnico. Architecture and a Bachelor's degree in Architecture and Urbanism from the Federal University of Minas Gerais (UFMG), Brazil, with equivalence to a Master's degree in Architecture granted by the Scientific Committee of the Department of Architecture and Urbanism at the University Institute of Lisbon / ISCTE. Member of Ordem dos Arquitectos (OA) in Portugal and Conselho de Arquitetura e Urbanismo (CAU) in Brazil.
Alexandra Alegre, Assistant professor at Instituto Superior Técnico, University of Lisbon since 2001, and researcher at CITUA (Centre for Innovation in Territory, Urbanism, and Architecture), where she coordinates the thematic line 'Knowledge Environments': school architecture, educational and recreational spaces, education and city, and housing. She was the Principal Researcher of the project "Atlas of School Architecture In Portugal_ Education, Heritage, and Challenges" (2016-2019), funded by the Foundation for Science and Technology (FCT). Currently, she is the Co-Investigator of the project "Álvaro Siza's Collective Housing: Projects, Contexts and Experiences (Porto. Lisbon-New York)" (FCT, 2022-2024) and the Principal Investigator of the project "The (Re)Design Of The Learning Environment. What Is Changing?" (2023-24) funded by CITUA. She has supervised master's and doctoral dissertations in Educational Architecture, Housing and Architecture, Urban Space and Rehabilitation. Author of the book "Arquitectura Escolar. O Edifício Liceu em Portugal (1882-1978)", published by Fundação Calouste Gulbenkian in 2012.

Mobility Justice and Big Data in urban planning
Towards an ecological approach to space of flows

Charitonidou, Marianna
Athens School of Fine Arts, Department of Art Theory and History, Athens, Greece, m.charitonidou@icloud.com

Abstract

The necessity to combine sustainable methods in architectural and urban design and democratization calls for a shift from technical to the socio-technical perspectives within the field of architecture and urban planning. At the centre of the paper is the conviction that this endeavour of combining social and environmental equity goes hand in hand with the intention of placing emphasis in critical thinking, self-reflection, and social awareness. It departs from the intention to re-invent what Kevin Lynch called "mental maps" or "cognitive maps" within the contemporary context within which we have the possibilities of elaboration of advanced methods of mapping. taking into consideration the latest advancements in the field of urban mapping and traffic engineering, the paper intends to enhance a new understanding of historiographical questions concerning the impact of the automobile on our perception and experience of the city. Nowadays, Big Data streams generated by mobile phones allow one to observe urban mobility at an unprecedented scale. Within the current context that is characterised by a rising concern about the impact of climate crisis, the endeavours to shape sustainable methods in architecture and urban planning are based on the use of advanced technologies such as urban scale digital twins and other tools aiming to visualise several parameters that are pivotal for establishing relevant approaches through real-time mapping. Among these parameters are the fluxes that concern both social and spatial mobility. The paper examines how the analysis of issues related to social and spatial mobility can be tackled simultaneously through the use of concepts such as "motility", and "mobility justice", which are used by urban sociologists Vincent Kaufmann and Mimmi Sheller respectively. The paper investigates how "motility" and "mobility justice" are of great importance for understanding the relationship between architectural and urban politics, migration and ecology. It also intends to relate Kevin Lynch's mental maps to the contemporary context. Moreover, the paper relates the endeavours of using urban scale digital twins for urban mobility policy decisions to concepts such as "space of flows", Ecumenopolis", and "planetary urbanization".

Key words: equitable futures, climate justice, mobility justice, urban scale digital twins, mental maps, cognitive maps, planetary urbanization, Ecumenopolis, space of flows, Kevin Lynch, Constantinos A. Doxiadis.

1. Understanding spatial and social mobility conjointly

The necessity to combine sustainable methods in architectural and urban design and democratization calls for a shift from technical to the socio-technical perspectives within the field of architecture and urban planning. At the centre of the paper is the conviction that this endeavour of combining social and environmental equity goes hand in hand with the intention of placing emphasis in critical thinking, self-reflection, and social awareness. Vincent Kaufmann, in *Re-thinking Mobility*, argues that "the speed potentials procured by technological systems of transport and telecommunications [can] be considered vectors of social change"[1]. He employs the term "motility" to refer to the operation of transforming speed potentials into mobility potentials, arguing that "[t]he notion of motility allows [...] to distinguish social fluidity, from spatial mobility"[2]. The social sciences approaches which are focused on social fluidity take into account the role of "transport and communication systems as actants or manipulators of time and space."[3] Kaufmann also highlights that the automobile "associates speed and freedom in space and time."[4] He distinguishes the following four models: firstly, the areolar model; secondly, the network model; thirdly, the liquid model, and, finally, the rhizomatic model[5]. Useful for addressing the issues of spatial and social mobility conjointly is the concept of "mobility justice", to which Mimmi Sheller refers in her book entitled *Mobility Justice: The Politics of Movement in an Age of Extremes*[6]. At the core of the concept of "mobility justice" is the intention to suggest a new way of understanding inequality and uneven accessibility to the mobility commons. The concepts of "motility" and "mobility justice" are of great importance for understanding the relationship between urban planning and mobility. Urban planning as discipline, in order to seriously take into account parameters concerning spatial and social mobility, should shape methodological tools permitting to address them in an entangled way that takes into account their dynamic dimension. This implies the creation of theoretical and methodological frameworks that allow us to reflect beyond disciplinary boundaries.

2. Relating Kevin Lynch's mental maps to the contemporary context

The field of urban mapping entails an embedded geographic technology providing mapping functionality and on-demand data services for online mapping applications. The paper departs from the observation that despite the fact that there have been conducted several theoretical studies focusing om the analysis of the mental mapping methods employed by Kevin Lynch at the Massachusetts Institute of Technology (MIT) in the 1950s and 1960s[7], there are not many applied projects aiming to provide interfaces enhancing our understanding of how the automobile has influenced our understanding of urban territory. The aim of this paper is to complement the existing scholarship that focuses on a quantitative understanding of issues related to the role of the car for our lives in the city with a qualitative understanding of these issues. It is based on the observation that, despite the fact that there are some quantitative studies focusing on the analysis of our contemporary experience of the relationship between the car and our experience of the city, there are no extensive qualitative studies providing tools that allow us to understand the cultural aspects related to the historical evolution of the impact of the car on our perception of the city.

This paper also suggests a theoretical approach that intends to overcome the existing schism between the methods of historical research in architecture and urban design and the cognitive-sciences oriented research in the domain of cognition, perception and behaviour in urban environments such as those conducted under the leadership of Prof. Dr. Christoph Hoelscher in the framework of the project "Cognition, Perception and Behaviour in Urban Environments"[8]. An interesting case related to the issues that this paper addresses is the project of Future Cities Laboratory entitled "Engaging Mobility" led by Dr. Pieter J. Fourie, which focuses on the analysis of current and future urban mobility challenges through travel behaviour research, big data informed simulation, designing and evaluating alternative solutions[9].

Kevin Lynch conceived mental maps in the 1950s and 1960s as a tool based on human perception and behaviour aiming to provide an understanding of how a city becomes legible[10]. According to Francis James Harvey, "[a] mental map represents particular geographic relationships based on the experience of an individual"[11]. As Harvey remarks, "Lynch cartographically represented people's mental maps of the city to show how they perceived and moved bout the city"[12]. This paper could be interpreted as an effort to rethink the approach that Lynch developed in his seminal book The Image of the City "in a new context of technological possibilities"[13]. The main components of Lynch's urban analysis were the Paths, Edges, Districts, Nodes and Landmarks. His seminal book entitled The Image of the City was based on the content of a project entitled "The Perceptual Form of The City" co-directed by himself and György Kepes at MIT. In the framework of this project, which was held from 1954 to 1959, Lynch and Kepes conducted a lot of field work in Boston, Jersey City and Los Angeles. The main objective of their project was to analyse how citizens perceived their landscape. For this purpose, they conducted interviews, produced numerous sketches and took photographs in the framework of their field work. The main concern of Lynch was to understand how people sense their city. He believed that this knowledge could contribute to the shaping of future planning efforts[14]. As Andrew Samuel Mondschein underscores, in his PhD dissertation entitled The Personal City: The

Experiential, Cognitive Nature of Travel and Activity and Implications for Accessibility, "[c]ognitive maps are those mental processes which allow individuals to store, recall, and utilize information about the built environment to make daily activity and travel choices"[15]. A concept that Lynch elaborated in order to address individual and collective perceptions of a city was that of "imageability". Telling regarding this concept is this following remark:

> "A highly imageable city… would seem well formed, distinct, remarkable, it would invite the eye and the ear to greater attention and participation. The sensuous grasp upon such surroundings would not merely be simplified, but also extended and deepened. Such a city would be one that could be apprehended over time as a pattern of high continuity with many distinctive parts clearly interconnected. The perceptive and familiar observer could absorb new sensuous impacts without disruption of his basic image, and each new impact would touch upon many previous elements. He would be well oriented, and he could move easily. He would be highly aware of his environment."[16]

Kevin Lynch considered cognition as "an individual process but its concepts […] [as] social creations"[17]. He defined as paths the "channels along which the observer customarily, occasionally, or potentially moves. They may be streets, walkways, transit lines, canals or railroads"[18]. Lynch shaped this method of mental mapping in the 1950s and 1960s when he was teaching at MIT. He conceived this method as an opposition against the top-down planning of the post–World War II era. An important study dealing with the influence of the car on the perception of the architecture of the city and the aesthetics of urban highways is Donald Appleyard, Kevin Lynch, and John Myer's *The View from the Road*[19]. Before Appleyard, Lynch, and Myer, and Robert Venturi, Denise Scott Brown and Steve Izenour, several modernist architects such as Le Corbusier conceived the post-war modernist cities as machines, placing particular emphasis on the role of the car. The interest of Le Corbusier in the impact of the automobile vision on urban planning is evident in Le Corbusier's *The Four Routes*[20]. Apart from the "The Perceptual Form of The City" that Lynch and Kepes directed at MIT, psychologist Kenneth Craik at Berkeley conducted an important research project focused on similar topics as the project of Lynch and Kepes. Craik's project was focused on the field of environmental psychology and his approach had an important impact on Donald Appleyard's work. A note-worthy collaboration is that between Donald Appleyard and Kenneth Craik in the framework of their research in the Environmental simulation Laboratory (ESL)[21].

3. Cognitively-active and cognitively-passive modes of travel and "deadpanning"
Important for understanding the special character of the experience of crossing the Las Vegas String is the meaning of "deadpanning", which Robert Venturi and Denise Scott Brown borrowed from Ed Ruscha's approach. The film Las Vegas Deadpan, which Venturi and Scott Brown with their students recorded in 1968 in the framework of the so-called "The Learning from Las Vegas Research Studio" is useful for understanding the implications of the "deadpanning" strategy[22]. As Martino Stierli remarks, in his article entitled "In Sequence: Cinematic Perception in Learning from Las Vegas", "'[d]eadpanning' […] designates a way of looking at things that tries to keep out the personal preferences and allusions of the observer as much as possible"[23]. Another notion that is of pivotal significance for analysing the perception of the city from the car is that of sequence. Both Kepes and Lynch were interested in the sequential nature of the perception of the city while crossing it by car. Kepes believed that "[e]ach path of travel offers its characteristic challenge", claiming that "[t]he basic unit of our urban vision, accordingly, is not the fixed spatial location but the transportation-defined pattern of a sequence of vistas."[24] Lynch remarks, in *The Image of the City*, regarding the sequential nature of the re-invented perception of the city thanks to the automobile: "Considering our present way of experiencing a large urban area...one is drawn toward another kind of organization: that of sequence, or temporal pattern"[25]. Andrew Mondschein, Evelyn Blumenberg, and Brian D. Taylor draw, in "Going Mental: Everyday Travel and the Cognitive Map", draw a distinction between the cognitively-active modes of travel and the cognitively-passive modes of travel. This distinction is useful given that it sheds light on the differences between the cognitively-active and the cognitively-passive gaze of different types of travellers[26]. For instance, Mondschein, Blumenberg, and Taylor consider the moving subjects that view the city walking or driving as subjects corresponding to the so-called cognitively-active modes of travel and the moving subjects that view the city as passengers in a car or on public transit as subjects corresponding to the so-called cognitively-passive modes of travel[27]. They also claim that the cognitive maps of the travellers corresponding to the former are more accurate than those of active travellers and have realised various tests that prove this hypothesis.

4. Urban scale digital twins and environmental equity
A 'digital twin' is a digital representation of a physical process, person, place, system or device. The term 'digital twin' refers to the digital representation enabling comprehensive data exchange and can contain models, simulations and algorithms describing their counterpart and its features and behaviour in the real world. The term 'digital twin' firstly emerged in the field of manufacturing sector to refer to digital simulation models that run alongside real-time processes. 'Digital twins' are digital replicas of physical entities. Their creation is based on the use of advanced technological applications, such as sensing, processing, and data transmission. Digital twins enhance evidence-based operational decisions and experimentation on urban policies. The current state of research concerning the role of digital twins in shaping urban policies is characterized by a dichotomy between scholars that focus on the technological and sustainable benefits of the use of urban scale digital twins and researchers that criticize 'digital universalism'. It is of pivotal importance to challenge this dichotomy, shaping methods based on a socio-technical perspective of using urban scale digital twins, and combining the technical, sustainable and social advantages of their use[28].

Urban scale digital twins are use nowadays for urban mapping. Digital twins are used in the field of urban analytics, as well as in the field of computational social sciences. ABI Research forecasts that urban digital twin deployments will exceed 500 by 2025[29]. According to Michael Batty, "[t]he idea of the digital twin [...] has emerged from the representation of the city in terms of its physical assets."[30] The digital twins are able to get updated following the changes of the physical equivalents thanks to the pairing between the virtual and the physical world. To understand what is the main idea behind the creation of digital twins we should bear in mind that "[a]n ideal digital twin would be identical to its physical counter-part and have a complete, real-time dataset of all information on the object/system"[31]. Recently, within the domain of urban planning and, more particularly, within the field of smart cities, the notion of urban scale digital twin has acquired a central place. Li Deren, Yu Wenbo, and Shao Zhenfeng define the 'digital twin' as a "simulation process that makes full use of physical models, sensors, historical data of operation, etc. to integrate information of multi-discipline, multi-physical quantities, multi-scale, and multi-probability"[32]. They also highlight the fact that the current debates concerning the notion of digital twin are characterized by plurality of how this concept is understood. They remark that "a consensus definition has not yet been formed"[33]. The common denominator of the different definitions of the term is the shared interest in the "bi-directional mapping relationship that exists between physical space and virtual space"[34]. The creation of digital twins is based on the intention to establish "real-time connection[s] between the virtual and the real"[35]. In the case of digital twins, the digital models, apart from "observing, recognizing, and understanding"[36] the physical world, they also aim to control and transform it. Martin Mayfield has emphasized the role of urban scale digital twins in providing a holistic approach to urban and infrastructure design[37]. Danah Boyd and Kate Crawford, in "Critical Questions for Big Data: Provocations for a cultural, technological, and scholarly phenomenon", analyse critically the role of big data within the current cultural and technological context of data-driven societies[38]. Li Deren, Yu Wenbo, Shao Zhenfeng argue that at the core of the development of urban-scale digital twins is the creation of "a complex giant system between the physical world and the virtual space that can map each other and interact with each other in both directions"[39]. They also underscore that the continuous generation of massive urban big data and the use of sensors within the cities for which the digital twins are created are necessary for the construction of urban scale digital twins.

To realize the central role of Europe within the framework of the endeavours to incorporate urban scale digital twins in decision making concerning urban planning, we should take into account the fact that "Europe is emerging as the main centre of development of urban digital twins, with over 60 % of the existing"[40] urban scale digital twins. The European Union has set the following goals regarding sustainable urban planning strategies: firstly, the empowerment of "urban actors towards common goals; secondly, the development of people-oriented urban planning strategies that aim to contribute to the social equity of communities; thirdly, the development of digital platforms and other digital tools that intend to enhance interactive and proactive approaches in urban planning decision-making, and "the creation of integrated, open, and functional technological infrastructures for the development of programmes and the provision of services (data-driven planning)"[41]. Among existing urban scale digital twins that are either in operation or under development are the twins of the following cities or districts: that of Athens in Greece, that of Plzeň in the Czech Republic, that of Dublin Docklands in Ireland, that of Herrenberg in Germany, that of Vienna in Austria, that of Zurich in Switzerland, that of New York in the United States of America, that of London in the United Kingdom, and that of Helsinki in Finland. Other note-worthy urban scale digital twins are those of Cambridge, Gothenburg, Munich, Newcastle, Paris, Rennes and Rotterdam[42]. Two programs that play a major role in shaping sustainable urban planning methods are the European New Green Deal, the Agenda for Sustainable Development and its Sustainable Development Goals, which is also known as SDGs. The former – the European Green Deal – is based on the intention to achieve zero net emissions by 2050. This program places particular emphasis "on achieving a circular economy by 2050, creating a sustainable food system and protecting biodiversity and pollinators"[43]. As John Hatcher remarks, "60% of organizations across major sectors are leaning on digital twins as a catalyst […] to fulfil their sustainability agenda"[44]. According to Hatcher, "digital twin implementations are set to increase by

36% on average over the next five years"[45]. The following main characteristics of urban scale digital twins should be highlighted: their scalability; their predictability thanks to the use of simulation algorithms; their capacity to integrate new elements thanks to the use of IoT sensors, and real-time data, and their capacity to enhance cooperation due to the fact that they can be broadly accessible[46]. Caprari also underscores that citizens can download and upload data enhancing in this way social equity and participatory design methods[47]. Gordon S. Blair distinguishes three challenges concerning the creation of digital twins: firstly, the challenge of "bringing the environmental assets together in one logical place, including both data assets and modelling assets"; secondly, the challenge of allowing different assets to work together as part of a larger digital twin architecture", and, thirdly, the challenge of ensuring "that the necessary storage and processing capacity is available when it is needed, especially given the sizes of the challenges and the associated potentially very large datasets."[48]

Fig. 1

Fig. 2

Urban scale digital twins can also contribute to the establishment of policies aiming to render more efficient several urban intelligence tasks, including, for instance, the management of traffic and power systems. Urban scale digital twins can be used to address climate adaptation and optimisation of mobility models. Their role in optimisation of mobility models within the framework of urban development is apparent in applications such as this concerning the automatic traffic test area in

Hervanta, Tampere[49] (Fig. 1). Another note-worthy example of urban scale digital twin that places particular emphasis on the simulation of urban mobility scenarios is that of the city of Herrenberg in Germany[50] (Fig. 2). A concept that is useful for better understanding the connection between decision-making in urban planning and urban mobility studies is that of "Transit-oriented development (TOD)", which refers to the "planned high-density development containing a mixture of residential, retail, commercial and community uses around a transit hub and surrounded by a high-quality urban realm that prioritises the pedestrian (and more recently the cyclist) over the automobile."[51] According to Ren Thomas, Dorina Pojani, Sander Lenferink, Luca Bertolini, Dominic Stead and Erwin van der Krabben, "Transit-oriented development (TOD) is often defined in terms of mixed-use development near and/or oriented to mass-transit facilities", while "[c]ommon characteristics of TOD include urban compactness, pedestrian and bicycle-friendliness, public spaces near stations, and stations designed to be community hubs (Transit Cooperative Research Program (TCRP), 2002)."[52] Several scholars, such as Miguel Padeiro, Ana Louro and Nuno Marques da Costa have highlighted the significance of "transit-oriented development (TOD) as a critical approach for achieving sustainable mobility"[53]. Urban scale digital twins could be used in relation to TOD in order to establish urban policies that can provide more sustainable solutions concerning urban planning decision-making.

5. The concepts of planetary urbanization and space of flows
The concept of "planetary urbanization" suggests an epistemological shift in the field of urban studies, promoting an understanding of urban constellations beyond the polarities characterising the field of urban studies in the early 20th century: it is useful for treating the connections between different national contexts and the relationship between the centres and peripheries and the urban and rural landscape. Sue Ruddick, Linda Peake, and Gökbörü S Tanyildiz, and Darren Patrick, criticising Neil Brenner and Christian Schmid's "planetary urbanization", suggest the elaboration of a social ontology of the urban[54]. They draw upon Marx's understanding of social ontology in The German Ideology. According to Ruddick, Peake, Tanyildiz, Patrick, at the centre of Brenner and Schmid's elaboration of the concept of "planetary urbanization" was the intention to express the necessity "for a new epistemology of the urban, one capable of deciphering the rapidly changing geographies of urbanization under early 21st-century capitalism"[55]. As Gediminas Lesutis highlights, "the planetary urbanization literature [was] […] inspired by [Henri] Lefebvre's work on urbanization"[56]. Lesutis also argues that the concept of "planetary urbanization" aimed to challenge "the city-centric epistemology of urban studies, highlights how cities, accumulating wealth, explode into space by subsuming all planetary resources to the influence of capitalist urban agglomerations and flows of increasingly fictitious and speculative capital"[57].
At the centre of Manuel Castells's approach are the following three concepts: 'space of flows', 'space of places', and 'timeless time'[58]. According to Castells, the network society is organised around these three concepts. Castells, through these concepts, intends to render explicit how the "incorporation of the impact of advanced forms of networked communication"[59] calls for a new understanding of societies. He places particular emphasis on the fact that in network society there are no boundaries, and suggested that contemporary urbanisation and networking dynamics should be studied conjointly. Additionally, he argued that transport and digital communication infrastructures should also be examined in relation to each other. To explain how the notions of time and space were transformed due to the transition to the so-called information age, Manuel Castells drew upon the work of several scholars in the field of social sciences such as Anthony Giddens[60], Scott Lash, John Urry[61], and David Harvey[62] among others. Through the notions of informational city, metropolitan region and dual city, Castells redefined the field of urban sociology. The main objective of Castells's approach is to render explicit how urban dynamics work[63]. In contrast with Saskia Sassen's global city[64], Manuel Castells's informational city emphasizes the significance of the "incessant flows of information, goods, and people"[65]. A turning point for his work is the theory he develops in *The Informational City: Information Technology, Economic Restructuring and the Urban-Regional Process*[66]. As Felix Stalder has highlighted, according to Castells's theory, cities should be understood as processes and not as places[67]. In the sixth chapter of *The Rise of the Network Society*, which is devoted to the spaces of flows, Castells analyses "[t]he relationships between the space of flows and the space of places, between simultaneous globalization and localization"[68]. He argues that "function and power in our societies are organized in the space of flows"[69].

6. Ecumenopolis, ekistics and the role of transport planning
Another concept that is useful for understanding the tendency to understand the road networks as a continuous network that connects the different urban and non-urban landscapes within a world-wide entity is the concept of "Ecumenopolis" coined by Greek urban planner Constantinos A. Doxiadis. "Ecumenopolis" started off with the hypothesis that urbanization, population growth, and the development of means of transport and human networks would lead to a fusion of urban areas, leading to megalopolises forming a single continuous planetwide city (Fig. 3). Doxiadis employed

different concepts to refer to different understandings of mobility corresponding to different historical eras. For the city of the 20th century, he used the concept of "megapolis", arguing that its main characteristic was the perpetual intensification of mobility flows, which would break the limits of the cities, altering not only their structure, and their very meaning. Doxiadis was convinced that the age of automobility demanded the founding of new urban types, which would be organized like beehives around multiple centres[70]. Doxiadis, in "Towards Ecumenopolis" - a confidential report that was prepared in January 1961 in the framework of the Research Project "The City of the Future" - understood infrastructure as a skeleton of a body covering the entire globe and resulting from the balance between settlements, production and nature[71]. In his second report on 'Ecumenopolis', which was also prepared in 1961 for the Research Project "The City of the Future", Doxiadis argued that Africa was the largest and most suitable area to welcome inbound capitals and investments[72]. The book entitled *Ecumenopolis: The Inevitable City of the Future* co-authored by Constantinos A. Doxiadis and J. G. Papaioannou is of pivotal importance for understanding Doxiadis's conception of 'Ecumenopolis'[73]. Doxiadis Associates prepared a report entitled "Toward an African Transport Plan" in 1962. This report intended to provide the basic layout of his 'Ecumenopolis'[74].
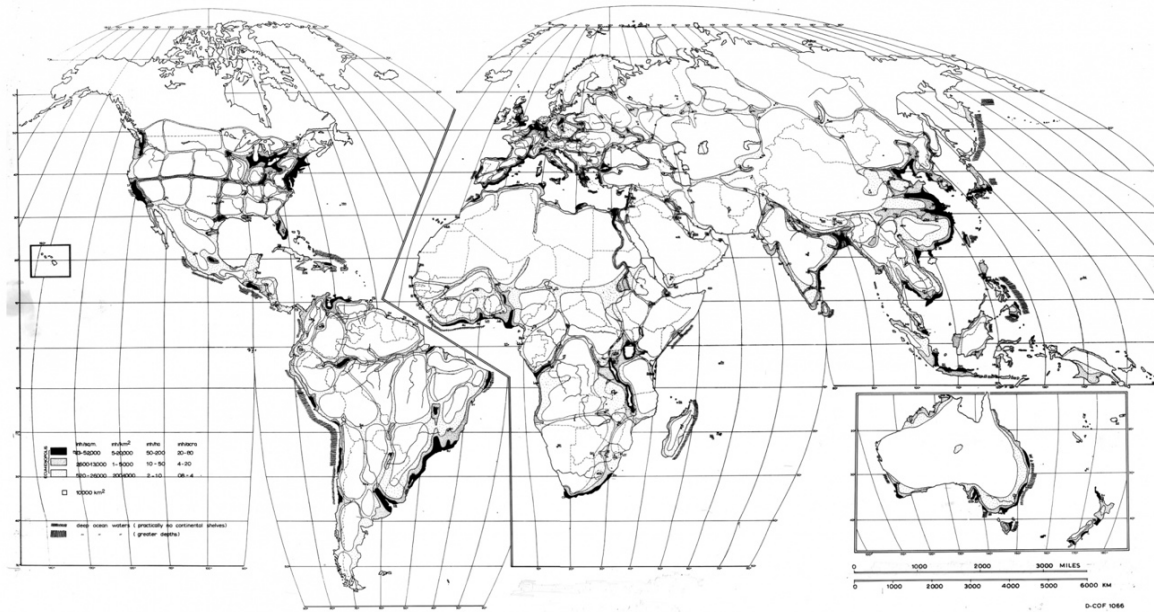
Fig. 3

Helen Couclelis reminds us, in "Conceptualizing the City of the Information Age", that Doxiadis's conception of 'Ecumenopolis' refers to "the coming network of cities of all different sizes that spans the entire globe, and which becomes, at the limit, a mesh of continuous corridors of urbanization ('Ecumene' is Greek for the inhabited world)."[75] In "Ecumenopolis: Tomorrow's City", published in 1968 in *Britannica Book of the Year 1968*, Doxiadis argues that "The big question that arises is not about its dimensions, structure, and form, but about the function of Ecumenopolis, the type of life that will be created within it, and the quality that Ecumenopolis will offer to man"[76]. He also highlights that imagination and courage are pivotal in order "to create a high quality of life within an Ecumenopolis of such dimensions"[77]. In this text, Doxiadis included a diagram of 'Ecumenopolis' accompanied by the following remarks: "Ecumenopolis on the earth in the year 2120, by which time it is expected that the population of the earth will have leveled off at a minimum of 20,000,000,000 people, and the population of the definitely urban areas at a minimum of 18,000,000,000 people."[78]
At the core of Doxiadis's ideas about how the living conditions in Ecumenopolis would be favourable are the concepts of "human scale", "human community", and "human city". His essay entitled "Ecumenopolis: Tomorrow's City" was also accompanied by a representation of 'Ecumenopolis' at night, as seen from a satellite. Doxiadis mentions commenting on this representation that "[a]gainst the dark seas and continents on a moonless night, the lighted parts show the universal city of man with the white parts being completely and densely developed and the less lighted ones being less so."[79] Important for understanding the conception of 'Ecumenopolis' is Doxiadis's concept of 'ekistics', which he examines in his essay entitled "Ekistic Analysis" originally in 1946[80]. Ekistics operated at three levels: firstly, general ekistics; secondly, urban planning, and thirdly, building design and construction. Both holism and interdisciplinarity lie at the heart of Doxiadis' approach to the understanding of human progress. Doxiadis drew a distinction between interdisciplinary and

condisciplinary science. In "Ekistics, the Science of Human Settlements", published in *Science* in 1970, Doxiadis underscored: "To achieve the needed knowledge and develop the science of human settlements we must move from an interdisciplinary to a condisciplinary science"[81].
According to Doxiadis, 'Ecumenopolis' would "form a continuous, differentiated, but also unified texture consisting of many cells, the human communities"[82]. He placed particular emphasis on the hierarchical structure of 'Ecumenopolis'. He believed that 'Ecumenopolis' should be organized around the following units: firstly, the family house; secondly, the small and large neighbourhoods; thirdly, the human community or basic cell or city; fourthly, the metropolis; fifthly, the megalopolis, and, finally, all the "consecutive units that will form the whole system"[83] (Fig. 4, Fig. 5). To highlight the significance of conceiving 'Ecumenopolis' in a hierarchical way, he discerns the following connections: its universal scale to its general frame, its national or local to the city level, and the individual expression of its inhabitants to their settlements. Doxiadis was convinced that transportation planning and communication strategies would play a major role in the endeavour to shape models of urban planning that would promote a high quality of everyday life. This becomes evident when he mentions that "[t]he systems of transportation and communications will be the circulatory and nervous systems of Ecumenopolis"[84].
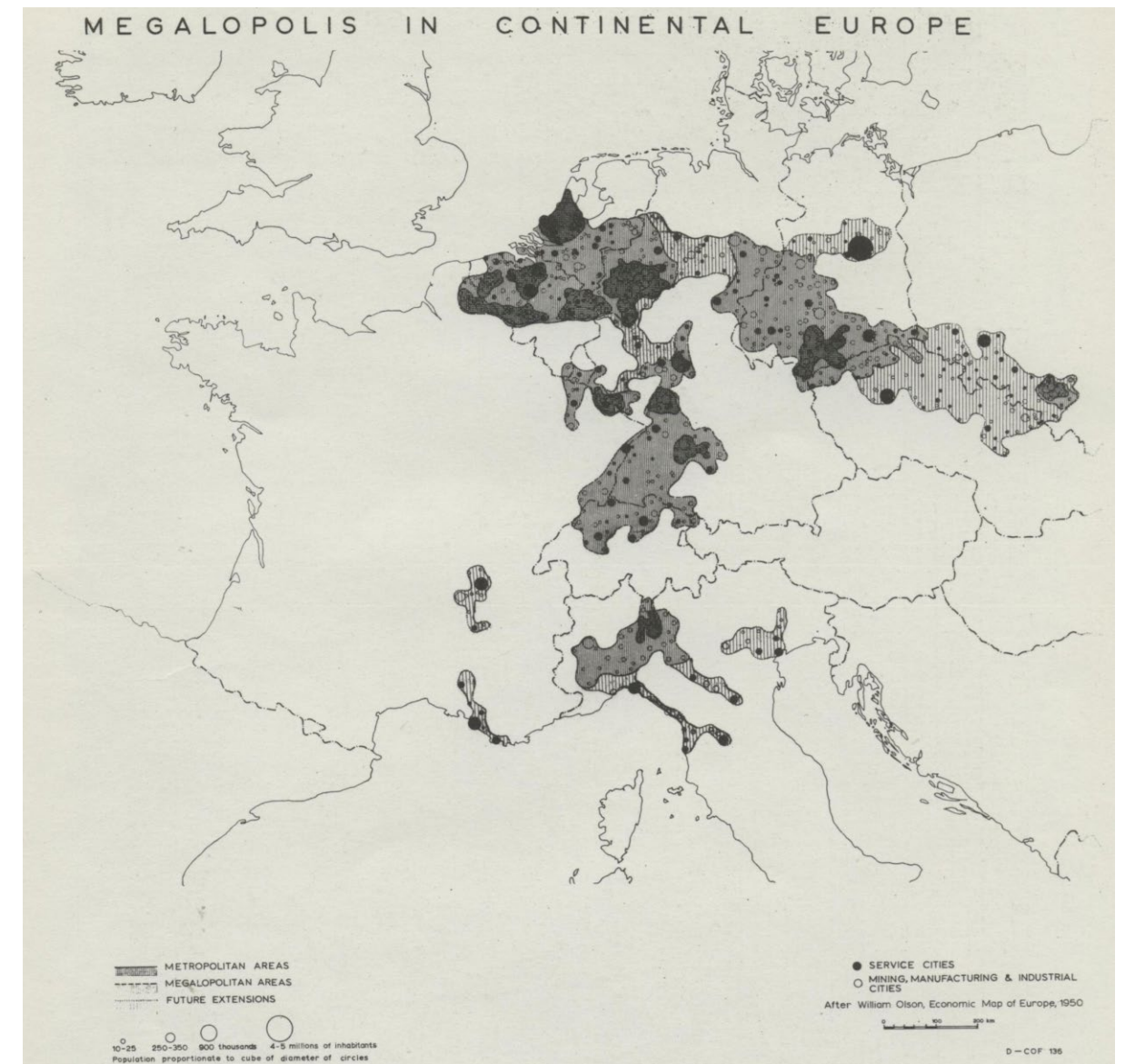
Fig. 4

Doxiadis in his projection in the future, which was the basis of 'Ecumenopolis', suggested that "5% of the habitable part of the earth [would] […] be developed as urban areas, 4,5% […] [would] be cultivated, and 50% […] [would] be natural". According to Doxiadis, each urban unit "should contain no more than 50,000 people, and should permit man to use public as well as private spaces with no interference (or as little interference as possible) from the automobile". These limits concerning population per urban unit would make possible to provide inhabitants with "clean air", offering

conditions that would make it possible to "live without noise, and have contact with nature in small planted squares and small parks."[85] At the end of his essay entitled "Ecumenopolis: Tomorrow's City", Doxiadis included a glossary of terms. There, he defined 'Ecumenopolis' as "the coming city that, together with the corresponding open land which is indispensable for man, will cover the entire earth as a continuous system forming a universal settlement." In "Ecumenopolis: Toward a Universal City", published in the issue of *Ekistics* of January 1962, argued that "[i]n the network of Ecumenopolis, all parts of the settlement and all lines of communication will be interwoven into a meaningful organism"[86]. At the core of Doxiadis's research on 'Ecumenopolis' was the role of mobility, and the exploration of strategies for combining sustainable design with transportation planning. It would be thought-provoking to relate the ideas of Doxiadis around 'Ecumenopolis' to the current debates around planetary urbanization and the endeavours of using urban scale digital twins for establishing policies concerning urban mobility.
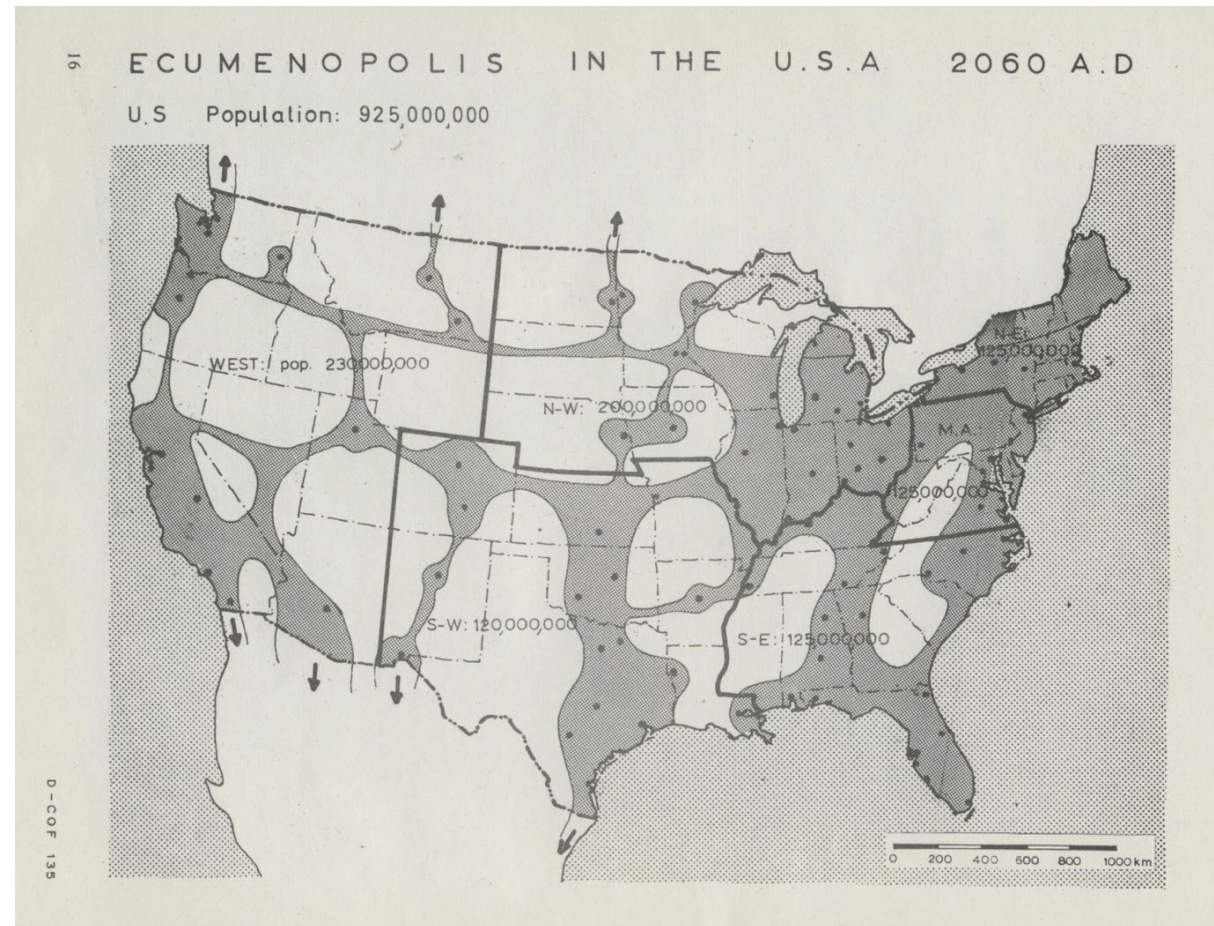
Fig. 5

6. Conclusions

To shape approaches that promote the use of Big Data for urban analytics without neglecting the social aspects involved in the strategies of formation of urban policies, it is important to bear in mind the weaknesses of 'digital universalism' and the assumptions on which the creation of urban scale digital twins. To do so, pivotal is the epistemological shift from technical to socio-technical perspectives. Such a shift is related to the endeavour to reveal "multiple dimensions beyond an infrastructure-technology focus"[87], and goes hand in hand with the effort to construct urban scale digital twins that aim to "reflect the specifics of the urban and socio-political context."[88] Particular emphasis should also be placed on the role of mobility in the formation of social positions. A shift that could help us better understand the difference between the concept of 'mobility' and that of 'motility' is the shift from the model related to contiguity to that related to connexity. As Mimmi Sheller argues, "a strong theorization of mobility justice is the best way to bridge these various dimensions of urban inequalities"[89]. Sheller also underscores the fact that shaping urban planning methods that aim to promote a sustainable future for the cities should go hand in hand with using less destructive modes of urban mobility[90]. Moreover, urban scale digital twins can help us use Big Data to enhance social advocacy. Incorporating urban scale digital twins in the decision-making processes concerning urban planning, urban planners can shape new participatory design methods. This could become possible through the interaction of citizens with the visualization of data concerning the existing situation of

urban environments. The capacity or urban scale digital twins to visualize data and make them accessible to non-specialized audience provide an opportunity to take seriously into account the opinions of citizens concerning a broad spectre of parameters during the decision-making processes. More specifically, the possibility to create applications that would visualize data concerning social and environmental equity in cities could contribute to the endeavours to combine the potentials that advanced technologies offer with the intention to promote methods of decision-making in urban planning that focus on participation.

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Image Captions
Fig. 1. Digital twin of Hervanta, Tampere. Source: https://www.sitowise.com/customer-story/digital-twins-open-new-world-urban-development
Fig. 2. HLRS researchers have been using a combination of data and 3D modelling to develop a digital twin of the city of Herrenberg. Credit: Fabian Dembski, HLRS.
Fig. 3. Doxiadis Associates, 'Ecumenopolis' 2060 © Constantinos and Emma Doxiadis Foundation
Fig. 4. Constantinos A. Doxiadis, Megalopolis in Continental Europe. © Constantinos and Emma Doxiadis Foundation
Fig. 5. Constantinos A. Doxiadis, Ecumenopolis in the USA 20160 AD. © Constantinos and Emma Doxiadis Foundation

Biography
Dr. Ing. Marianna Charitonidou is architect engineer, urbanist, historian and theorist of architecture and urbanism, expert in sustainable environmental design, and curator. She is leading the project *Constantinos A. Doxiadis and Adriano Olivetti's Post-war Reconstruction Agendas in Greece and in Italy: Centralising and Decentralising Political Apparatus* at Athens School of Fine Arts, and is teaching architectural design studio, and history and theory of architecture and urbanism at Leeds Beckett University. She is Founder & Principal of Think Through Design Architectural, Urban and Landscape Design Studio. Apart from her PhD thesis *The Relationship between Interpretation and Elaboration of Architectural Form: Investigating the Mutations of Architecture's Scope* (National Technical University of Athens, 2018), she completed the following two postdoctoral projects: *The Travelling Architect's Eye: Photography and the Automobile Vision* at the Department of Architecture of ETH Zurich, where she was Lecturer, and *The Fictional Addressee of Architecture as a Device for Exploring Post-colonial Culture: The Transformations of the Helleno-centric Approaches* at the School of Architecture of the National Technical University of Athens. Among her more than 90 peer-reviewed publications are the following two monographs: *Architectural Drawings as Investigating Devices: Architecture's Changing Scope in the 20th Century* (Routledge, 2023), and *Drawing and Experiencing Architecture: The Evolving Significance of City's Inhabitants in the 20th Century* (Transcript Publishing, 2022). Website: https://charitonidou.com/

Comparison of *Jiàngòu* and *Kekkō*
Differences in Terminology Translations of Tectonic Between China and Japan in *Studies in Tectonic Culture*

Chen, Ye
Nagoya Institute of Technology, Tsukuri College, Graduate School of Engineering, Nagoya, Japan, chen.ye@nitech.ac.jp

Abstract

Studies in Tectonic Culture (Frampton, 1995) played an important role in the spread of tectonic as an architectural term. The translators of the Chinese (translated by Junyang Wang, 2007) and Japanese (translated by Tsuyoshi Matsukata and Sotaro Yamamoto, 2002) editions of the book introduce words that have rarely been used as architectural terms as translations for tectonic. Generally, critics, architects, and students at architectural colleges have widely used *jiàngòu*, the Chinese translation. Even other fields, such as social science and literary criticism, borrow the word *jiàngòu* from architecture. However, the Japanese translation, *kekkō,* exhibits less influence in Japan compared to that of *jiàngòu* in China. Even in the architectural field, *tekutonikku* and *kōchiku* are seemingly used more frequently than *kekkō* as translations of tectonic.

In contrast to *jiàngòu*, which is an entirely new terminology in China, *kekkō* originates from architecture. However, nowadays, in the majority of situations, *kekkō* is used as a daily term that scarcely recalls its architectural origins. Apart from the cultural differences between the words, the intention of the translators, which can be observed by the words they selected in the translation and their articles, may play an essential role in the unique development of *jiàngòu* and *kekkō*. By comparing the words chosen in the Chinese and Japanese editions of *Studies in Tectonic Culture* (Frampton, 1995) and information from related articles, this study reveals the differences in the intention of the respective translators of *jiàngòu* and *kekkō*. The results indicate that the Chinese edition indicates the ambition of the translator to generalize *jiàngòu* compared to the Japanese edition, which exhibits the intention of remaining faithful to the original.

Key words: tectonic, *jiàngòu*, *kekkō*, terminology translation.

1. Introduction

Tectonic is derived from the Greek *tekton*, signifying carpenter. As a term, it can be interpreted, in a narrow sense, as referring to a frame, especially when distinct from stereotomic, or, in a broad sense, as incorporating the poetic aspects of construction. Many architectural theorists have contributed discussions on tectonic. Among these discussions, Kenneth Frampton's *Studies in Tectonic Culture: The Poetics of Construction in Nineteenth and Twentieth Century Architecture* (MIT Press, 1995) played an important role in the spread of tectonic as an architectural term. The book was translated into Japanese by Tsuyoshi Matsukata and Sotaro Yamamoto and into Chinese by Junyang Wang (also known as Qun Wang). In the Japanese edition (TOTO Publishing, 2002), the term tectonic is translated into *kekkō*, while in the Chinese edition (China Architecture & Building Press, 2007) it is translated into *jiàngòu*. *Kekkō* and *jiàngòu* were rarely used as architectural terms previously, and the Japanese and Chinese translators selected these words with careful consideration. However, subsequent usage of these terms in the field of architecture significantly diverges. In China, critics, architects, and students at architectural colleges, among others, widely use *jiàngòu*. Even other fields, such as the social sciences and literary criticism, borrow *jiàngòu* from architecture. In contrast, *kekkō* exhibits less influence in Japan compared to that of *jiàngòu* in China. In the architectural field, *tekutonikku* and *kōchiku* are seemingly used more frequently than *kekkō* as Japanese translations of tectonic.

Although *jiàngòu* is a new terminology in China, *kekkō* originates from architecture. However, in the majority of cases, *kekkō* is currently used as a daily term that barely recalls its architectural origin. In addition to the cultural differences between the two words, the intentions of the translators, which can be inferred from their word choices and articles, may play an essential role in the unique development of *jiàngòu* and *kekkō*. To examine these differences in the intentions of translators of the Chinese and Japanese editions, as well as their potential influence on the development of the respective translations, the current study conducts a comparative analysis of *jiàngòu* and *kekkō* from the following perspectives:

– The reason why the translator chose *jiàngòu* or *kekkō* instead of other existing translations
– The correspondence between the translation and tectonic in *Studies in Tectonic Culture*
– The translations of *construction* and *structure*, which are closely related to the term tectonic in *Studies in Tectonic Culture*

By revealing the divergent intentions of the Chinese and Japanese translators and their influence on the development of the terminology within their respective countries, this study provides insights into the factors that may influence the dissemination of translated terms from English to cultural contexts utilizing Chinese characters.

2. Chinese and Japanese translations of tectonic

In China and Japan, the translations of *Studies in Tectonic Culture* were not the first publications to translate the term tectonic into their respective languages. The translators carefully considered these translations when selecting their translations for the term in *Studies in Tectonic Culture*. Therefore, providing a brief review of the various translations of tectonic, including those selected by the translators of *Studies in Tectonic Culture*, is necessary to better understand their intentions in their word choices. Additionally, although the Japanese edition had two translators, Matsuhata served as the primary translator, and available sources (including the translators' afterword) regarding word choice were written by Matsuhata. Therefore, the subsequent discussion on the Japanese translation will primarily revolve around Matsuhata's perspective. Further, given the consensus between the two translators regarding the selection of important terminology during the translation, this study infers that Matsuhata's viewpoint represents that of both translators.

2.1. *Tekutonikku*, *kōchiku*, *honegumi*, and *kekkō* in Japan

In Japan, there are multiple translations for tectonic, including *tekutonikku*, *kōchiku*, *honegumi*, and *kekkō*. Given that the Japanese language employs three writing systems, namely, kanji (adopted Chinese characters), hiragana, and katakana, the corresponding writing systems for these translations are as follows:

– *Tekutonikku* (katakana)
– *Kōchiku* (kanji)
– *Honegumi* (kanji and hiragana)
– *Kekkō* (kanji)

Tekutonikku is a katakana-based translation of tectonic. Katakana is commonly used for foreign loanwords. It is the simplest method to translate a foreign term by representing its pronunciation in

Japanese. Prior to the publication of the Japanese edition of *Studies in Tectonic Culture*, the journal *10+1* published a translation of the first chapter[1], in which the translator (Yasuhiro Minami) consistently used *tekutonikku* to translate tectonic. Other articles[2,3] discussing tectonic also used *tekutonikku* before and after the publication of the Japanese edition of *Studies in Tectonic Culture*. Apart from these articles, articles or books that used *kōchiku* or *kekkō* also employed *tekutonikku* to a certain extent. For example, in articles[4,5] published on the *10+1 website*, Koichi Kato used *kōchiku* and *tekutonikku*. Arata Isozaki added *kekkō* in brackets after *tekutonikku*[6]. Even in the Japanese edition of *Studies in Tectonic Culture*, the title employs *tekutonikku*, although the translator consistently uses *kekkō* in the main text. This indicates that *tekutonikku*, which naturally relates to the origin of the term and highlights its foreign background, is the easiest choice. Additionally, neither *kōchiku* nor *kekkō* is generally accepted as the Japanese translation for tectonic, and these words do not naturally refer to tectonic in Japanese.

Although *tekutonikku* may suffice as a translation for tectonic, katakana is typically reserved for proper nouns. Thus, Matsuhata advocates that if a corresponding kanji vocabulary exists, kanji should be used to translate[7]. Moreover, kanji may be more appropriate for readers unfamiliar with tectonic to interpret the meaning of the new term. The next question is what kanji is best suited to convey the meaning of tectonic?

In the Japanese edition of Frampton's *Modern Architecture: A Critical History* (translated by Toshio Nakamura, 2003), Nakamura used *kōchiku* to translate tectonic[8]. Although this term can refer to the process or method of constructing an object, it may be too general to be considered a specialized architectural term. Moreover, in the translation of the first chapter of *Studies in Tectonic Culture*, Minami employed *kōchiku* to translate construction[9]. This demonstrates that using *kōchiku* for tectonic may imply a problem in distinguishing tectonic from construction. Furthermore, *kōchiku* may not effectively convey the distinction between tectonic and stereotomic identified in Gottfried Semper's theory. Matsuhata criticized Nakamura's use of *kōchiku* as a translation for tectonic in his discussion of the Japanese translation of tectonic in 2007[10]. Later, in another article, he reiterated that *kōchiku* was a mistranslation and pointed out that intentionally promoting and emphasizing this mistranslation was incorrect[11]. Matsuhata further argued that scholars were using words apart from *kōchiku* to translate tectonic in their research on Semper because they had some insight into the inappropriateness of using *kōchiku*. For example, Gakuji Yamamoto opted for *honegumi* to better illustrate the difference between tectonic and stereotomic[12]. However, *honegumi* primarily pertains to framework and emphasizes the aspect of shape over art in the framework. In contrast, *kekkō*, which was first employed by Saburō Okura to translate tectonic in his studies on Semper, was more appropriate according to Matsuhata.

Kekkō is a compound word formed by two kanji characters. The first signifies knotting, tying, binding, or connecting and the second refers to framework, structure, or construction. When these characters are combined, *kekkō* can describe the arrangement or organization of elements or parts constituting a whole, such as the framework or structure of a building. Given its architectural origins, the excellence of a framework or structure has led to the use of *kekkō* as an adjective meaning excellent or satisfactory[13]. Although the extended meaning remains prevalent in modern Japanese, the original architectural meaning of *kekkō* is rarely seen. Surely, Matsuhata knew its meaning in everyday use but valued the architectural origins of *kekkō* more[14].

In addition to its architectural origin, Matsuhata expounded upon two Japanese words sharing the same first character as *kekkō* to illustrate the appropriateness of *kekkō* as a translation for tectonic. The first is *musubu* (verb) or *musubi* (noun of *musubu*), which was also mentioned in *Studies in Tectonic Culture* to explain Semper's tectonic theory and its ethnographic origin. In Japanese, *musubi* refers to the act of tying or binding an object using a knot, recalling the origin of the framework that employs rope to bind linear materials, such as bamboo or wood, to form the entire structure. This allusion enables *kekkō* to convey the distinction between tectonic and stereotomic but with a focus on the method through which materials are combined rather than the shape of the framework. The second word is *kekkai*, meaning enclosure or barrier in Japanese. Its meaning suggests that the shared kanji character can function as the end or beginning of a space. Additionally, *musubi* can refer to the end of a time span due to its close relation with *shime*. These nuances connect the kanji character to the original architectural practice of defining space and time and integrating things, demonstrating Okura's insight for selecting *kekkō* as the translation for tectonic[15].

In summary, Matsuhata primarily opted for *kekkō* for the following reasons:

– Katakana is typically reserved for proper nouns. If a kanji translation exists, using this translation is preferable.
– Although *kekkō* is commonly used with different meanings, the term originated from architecture.
– As a translation using kanji characters, *kekkō* better captures the meaning of tectonic than *honegumi* or *kōchiku*. With its first character, shared with *musubu, musubi,* and *kekkai*, it can convey the narrow

sense of tectonic as the art of the frame, and contrast it with stereotomic. Additionally, it can encompass the broader sense of the term by recalling original architectural practices.

2.2. *Gòuzhù, gòuzào, yíngzào,* and *jiàngòu* in China

Chinese and Japanese use Chinese characters; thus, many architectural terms in Chinese are borrowed from Japanese kanji translations. However, despite the Japanese edition of *Studies in Tectonic Culture* being published before the Chinese edition, *jiégòu,* which shares the same kanji as *kekkō,* is not a feasible translation for tectonic because *jiégòu* is a fixed translation of structure in Chinese; using this term to translate tectonic would inevitably lead to confusion.

The earliest Chinese article that referenced *Studies in Tectonic Culture* in 1996 used *gòuzào* to translate tectonic in the title, while it used *yíngzào* in the subsequent discussion[16]. However, *gòuzào* mainly refers to construction methods in Chinese and is an unsuitable translation. Wang, the translator of the Chinese edition of *Studies in Tectonic Culture*, argues that the term construction encompasses the meaning of *gòuzào* (mainly referring to construction methods) and *jiànzào* (mainly denoting the building process and activity) in Chinese architectural terminology. According to Wang, *gòuzào* as a translation for tectonic would restrict it to a narrower scope than construction, which is unsuitable. Alternatively, *yíngzào* refers to the process of constructing or building a physical structure and creating a particular atmosphere or feeling through the design and construction. Wang believed that *yíngzào* was the closest Chinese architectural term to tectonic. However, the inherent meaning and cultural background of *yíngzào* render it less suitable to effectively convey the profound cultural context of tectonic[17].

The Chinese edition of *Modern Architecture* was published earlier than *Studies in Tectonic Culture*. In the first Chinese edition of *Modern Architecture* (China Architecture & Building Press,1988)[18], translators Shan Yuan et al. used *gòuzào* to translate tectonic, while the third edition, translated by Qinnan Zhang (SDX Joint Publishing, 2004)[19], used *gòuzhù*. The Chinese characters for *gòuzhù* are the same as those for *kōchiku* in Japanese and they bear similar meanings. However, Wang believes that in Chinese, this term is very specific in its reference to construction and lacks inclusivity in conveying the poetic meaning of tectonic or its association with fabrics, craft products, and other elements exceeding architecture[20].

In one of his articles, Wang explains his choice of *jiàngòu* as the translation for tectonic based on the characters of the word. He highlights that the Chinese characters *jiàn* and *gòu* in *jiàngòu* encompass fundamental meanings related to tectonic, such as **jiànzhùde** (architectural), *jiégòude* (structural), **gòuzàode** (constructive), and **jiànzàode** (building). Additionally, *jiàngòu* was a term that lacked a dominant and stable meaning, making it easy to assign new meanings to it and differentiate it from construction and structure[21].

Wang had used the term *jiàngòu* to discuss the book and tectonics several years prior to the publication of the Chinese edition of *Studies in Tectonic Culture* in 2007. In 1998, Wang published an article discussing the work of Jacques Herzog and Pierre de Meuron[22]. This article initiated a profound theoretical discussion on tectonic and skin in architecture in Mainland China[23]. In 2001, Wang contributed two additional articles[24, 25] providing detailed interpretations of *Studies in Tectonic Culture*. Over time, as design practices and academic discussions on tectonic continued, *jiàngòu* gradually gained widespread acceptance as the preferred translation for tectonic in Chinese[26].

In summary, in contrast to Japanese, which has the option to utilize katakana to phonetically translate tectonic, notably, the Chinese writing system solely relies on Chinese characters. Therefore, early endeavors to translate tectonic into Chinese focused on determining the Chinese vocabulary that best conveyed its meaning. Terms such as *gòuzào*, *gòuzhù*, *yíngzào*, or *jiàngòu* were unable to fully capture the narrow sense of tectonic in contrast to stereotomic. However, *jiàngòu* eventually emerged as the widely accepted translation for tectonic. This can be attributed not only to the inherent characteristics of the term but also the academic activities and numerous scholarly discussions focusing on *jiàngòu* that were led by its proponent.

3. *Kekkō, jiàngòu,* and tectonic in *Studies in Tectonic Culture*

Although Matsuhata and Wang present clear arguments and justifications for their respective translations of tectonic, their translations of tectonic are not always consistent. Although the Japanese edition uses *kekkō* as the translation for tectonic in the main text, it uses *tekutonikku* in the title. By contrast, the Chinese edition maintains consistency by using *jiàngòu* in the title and main text. Furthermore, the treatment of tectonic in the main text differs between the Chinese and Japanese editions.

The Chinese edition made deliberate efforts to distinguish between the broad and narrow senses of tectonic. The broad sense is translated as *jiàngòu*, whereas the narrow sense is translated as *kuàngjià* or *gòujià*, which mean framework or skeleton in Chinese. *Kuàngjià* and *gòujià* are similar to Yamamoto's *honegumi* but face the same challenge of being unable to effectively convey the

aesthetic meaning of construction implied by tectonic. As a result, differentiating it from the concept of skeleton or framework is difficult.

Although Wang provided additional annotations in the form of the original text appended after corresponding translations, such as *gòujià (tectonic)* and *kuàngjià (tectonic)*, to indicate their correspondence with the narrow sense of tectonic, some instances in the book occur where this distinction is not explicit. For example, in passages such as "Perret will return to a more straightforward level of tectonic articulation"[27] and "at the same time, as in the foyer of the Théâtre des Champs-Elysées, the ceiling treatment and the paving pattern were to echo the orthogonal network of the basic skeleton,"[28] tectonic and skeleton are translated as *kuàngjià* without accompanying clarifications. This indicates that although the Chinese translation endeavored to differentiate between the broad and narrow connotations of tectonic, the translator evidently focused on the broad interpretation.

Furthermore, a few translations in the Chinese edition seemingly intentionally emphasize that *jiàngòu* is a broad concept that includes the term stereotomic, to further distinguish it from the narrow sense of tectonic. For instance, the Chinese translation of "in a similar way a certain stereotomic expressivity may be seen …"[29] includes the term *jiàngòu,* and its meaning is closer to the "exploration of the **jiàngòu** expression also appears in stereotomics …." (emphasis added). These translation choices reflect Wang's intent to convey that *jiàngòu* is a broad concept that encompasses the term stereotomic and the narrow sense of tectonic.

The emphasis on the broad sense of tectonic may be related to Wang's evolving interpretation of Frampton's tectonic theory. In an article in 2008, Wang highlighted the structural rationalism of Eugène Viollet-le-Duc as the basis for Frampton's tectonic theory, which emphasizes the significance of expressing architectural form through the interplay between structure and forces[30]. Subsequently in 2011, Wang mentioned Semper's four elements of architecture alongside structural rationalism as the theoretical foundations of *Studies in Tectonic Culture*[31]. In 2016, Wang listed Sekler's definition of tectonic as the third theoretical foundation in addition to those two theories[32]. This transformation reveals Wang's deliberate simplification of the interpretations of tectonic and a lack of sufficient emphasis on Semper during its initial stages, possibly to avoid difficulties in comprehension that may emerge from excessively complex explanations. Similarly, exclusively assigning *jiàngòu* to the broad sense of tectonic while employing alternative terms to translate the narrow sense may stem from intending to circumvent the challenges posed by intricate semantics, thereby ensuring accessibility.

In contrast, Matsuhata's choice of *kekkō* as the translation for tectonic, which was borrowed from Okura's research on Semper, suggests that he did not intend to distinguish between the narrow and broad meanings of tectonic. Consequently, the Japanese edition consistently used *kekkō* in the main text. With regard to differentiating between the narrow and broad senses of tectonic, Okura, who initially adopted *kekkō* to translate tectonic, discussed Semper's usage of tectonic in his research. Okura noted that though Semper's usage conveyed a specific and narrow meaning compared with the broad significance of the term as the organizing principle of constructivist composition in art, Semper continued to consider it a central concern in architectural form, which encompassed the general sense of the term in modern German[33]. On this basis, Okura translated tectonic into *kekkō*. Consequently, *kekkō* has encompassed the narrow and broad meanings of tectonic throughout its usage as the translation for tectonic.

Furthermore, in the Japanese edition, *kekkō* is primarily used only in instances in which the corresponding sentence in the original English edition includes the term tectonic. However, in the Chinese edition, *jiàngòu* is commonly used even when the corresponding sentence in the English edition does not include tectonic. This tendency can be prominently observed in the subtitles of the first chapter, that is, "Topography,"[34] "Corporeal Metaphor,"[35] "Ethnography,"[36] and "Technology."[37] Although the original text does not feature tectonic, the Chinese edition introduces *jiàngòu* prior to each translated term: *jiàngòu yǔ dìxíng*[38] (tectonic and topography), *jiàngòu yǔ shēntǐ de yǐnyù*[39] (tectonic and corporeal metaphor), *jiàngòu yǔ wénhuà rénlèixué*[40] (tectonic and ethnography), *jiàngòu yǔ jìshù*[41] (tectonic and technology), thereby emphasizing the presence of *jiàngòu*.

This practice of adding *jiàngòu* is recurrent throughout subsequent chapters. An example of this tendency can be observed in Chapter 8. In the sentence, "surely the most singular aspect of Jorn Utzon's contribution is his particular concern for the expressivity of structure and construction,"[42] which is found at the beginning of Chapter 8, the Chinese edition explicitly attributes Utzon's contribution to *jiàngòu* culture[43]. However, in an earlier version of this chapter, Wang did not employ *jiàngòu* in the translation of the same sentence[44]. Hence, the addition of *jiàngòu* in the Chinese edition is not a consequence of Chinese grammar conventions; instead, it was a conscious decision made by the translator. This can be viewed as a compensatory measure for using alternative terms to translate the narrow meaning of tectonic in the Chinese edition. Through the addition of these supplementary instances, the impression of its broad meaning is reinforced for readers.

In general, when comparing the loose correspondence between *jiàngòu* and tectonic in the Chinese edition with the nearly one-to-one correspondence between *kekkō* and tectonic in the Japanese

edition, *kekkō* serves as a consistent term corresponding to tectonic in the English edition. This strict correspondence indicates the translator's intention to establish *kekkō* as a fixed term aligned with tectonic. Conversely, the differentiation between the broad and narrow meanings of tectonic and the emphasis on *jiàngòu* in the Chinese edition imply Wang's efforts to prevent *jiàngòu* from being exclusively interpreted as a narrow concept. As Wang mentioned, this term was selected for the sake of convenience in assigning it a new meaning. This new meaning is primarily based on the broad meaning of tectonic but includes subtle distinctions. Thus, there is a possibility that this intention laid the groundwork for the adoption of *jiàngòu* in various fields beyond architecture in China.

4. Translations of construction and structure in *Studies in Tectonic Culture*.
Studies in Tectonic Culture cites Sekler's delineation of tectonic in "Structure, Construction and Tectonics," which Wang identifies as one of the three theoretical foundations of Frampton's tectonic theory. Given the inherent interrelations among construction, structure, and tectonic, this section examines the translations of construction and structure in the Chinese and Japanese editions.
Regarding the term structure, the Chinese and Japanese editions adopted relatively standardized translations. Consistent with conventional translations, structure is predominantly rendered as *jiégòu* and *kōzō* in the Chinese and Japanese editions, respectively. However, the translation of construction poses an intricate challenge.
In the Japanese edition of *Studies in Tectonic Culture*, construction is primarily translated as *kōhō*. According to the notes in the afterword, the Japanese edition did not use common translations such as *kensetsu* or *kōzō* for construction. This decision was based on considering the meaning of the term and the objective of distinguishing it from other terms[45]. In Japanese, *kensetsu* is a comprehensive term that encompasses the entire process of creating new structures and the industry supporting it. Using *kensetsu* to translate construction would emphasize the building process or the industry instead of the methods of construction, which could lead to difficulties in distinguishing construction from "the building of" or "to build." Conversely, *kōzō* is more closely associated with the concept of structure. Using *kōzō* to translate construction would make differentiating between construction and structure challenging. Additionally, in the field of architecture in Japan, *kōzō* is closely linked to the structural mechanics and engineering aspects of construction. Therefore, *kōhō* was introduced as a substitute for *ippan kōzō*[46], emphasizing the manner in which a building is constructed, as well as the principles and methods used to construct it. The careful selection and use of *kōhō*, *kensetsu*, and *kōzō* demonstrate the translators' conscientious efforts to faithfully convey Frampton's intent.
In contrast, the translations of construction in the Chinese edition exhibit a certain degree of inconsistency. First, in the subtitle, "The Poetics of Construction in Nineteenth and Twentieth Century Architecture," construction is translated as *jiànzào* but as *gòuzào* in the title "Structure, Construction and Tectonics." As Wang mentioned, construction encompasses the meaning of *gòuzào* (construction method) and *jiànzào* (construction behavior) in Chinese[47]. The Chinese edition flexibly employs *gòuzào* or *jiànzào* to translate construction on the basis of the context. However, *jiànzào* is also used to translate *building*, denoting construction behavior. This tendency indicates that the Chinese edition lacks an explicit objective in differentiating construction from building.
Moreover, notably, the Chinese edition employs another translation for construction that is used as frequently as *gòuzào* or *jiànzào*: *jiégòu*. As previously mentioned, *jiégòu* is typically used to translate structure in Chinese. However, the frequent usage of *jiégòu* to translate construction can be attributed to the limited scope of *gòuzào* in the field of architecture. Similar to *kōhō* in Japan, *gòuzào* pertains to the discipline of building constructions in China; however, its scope is narrower than that of *kōhō* in Japan. This disparity is evident in the respective teaching contents of building construction. In China, the subject, usually referred to as *gòuzào*, primarily focuses on the specific construction methods of building elements, such as roof, walls, doors, and windows. The overall construction system is considered a secondary or even unnecessary aspect in the earlier stages. Meanwhile, in Japan, the teaching contents for *kōhō* encompass the overall composition of the main structural system of buildings (including construction processes) and the specific construction methods of composing elements, with greater emphasis on the entire building system. This divergence may explain the use of *jiégòu* instead of *gòuzào* in the Chinese edition when referring to the construction of the overall structural system. Consequently, readers of the Chinese edition encounter difficulties in distinguishing between not only construction and building but also construction and structure. To a certain extent, this fostered a simplified understanding of *jiàngòu* as a principle to express the authenticity of a structure. Moreover, this principle facilitated the popularization of *jiàngòu* due to its simplicity and ease of comprehension as well as practical applications. Thus, the frequent use of *jiégòu* to translate construction in the Chinese edition is not only due to the limitations of *gòuzào* but also a deliberate strategy employed by the translator to expedite the dissemination of *jiàngòu* as a familiar architectural term. This notion is reasonable given Wang's earlier writings, which emphasize structural rationalism as the fundamental theoretical underpinning of *Studies in Tectonic Culture*.

5. Conclusion
This study explores the different considerations of the translators of the Chinese and Japanese editions of *Studies in Tectonic Culture* when selecting translations for the term tectonic, and compares the translations for tectonic, construction, and structure. The choices of *jiàngòu* and *kekkō* by the translators reflect their careful consideration of the linguistic and academic contexts in China and Japan, respectively. These choices consider the meanings conveyed by the Chinese characters and their implications. As a result, a complex correspondence is established among the Chinese, Japanese, and English terminologies related to tectonic, construction, and structure (Fig. 1). Furthermore, the use of Chinese characters in the Chinese and Japanese writing systems, along with the interconnected nature of their cultures, contributes to the intricate network of connections among the vocabularies.
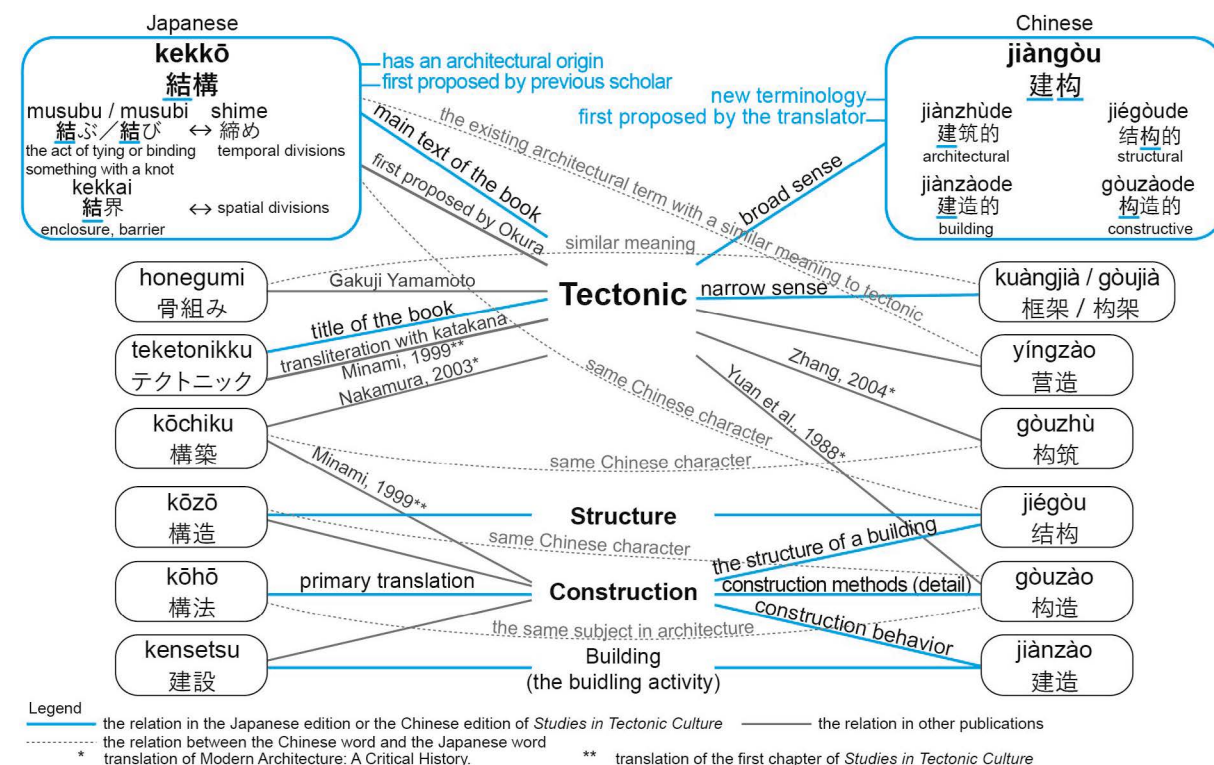
Fig. 1

The primary discrepancies in word choices between the translators of the Chinese and Japanese editions of *Studies in Tectonic Culture* can be summarized as follows:

– The Chinese translator opted to introduce a new term, *jiàngòu*, to facilitate a fresh interpretation, while the Japanese translators opted to use an existing term, *kekkō*.
– The Chinese translator highlighted *jiàngòu* as a translation for tectonic in its broad sense, while the Japanese translators emphasized the suitability of *kekkō* as a translation for tectonic regardless of the context in which it was used.
– The Japanese translators diligently maintained the distinctions among terms such as tectonic, construction, and structure, as in the original English edition, whereas the Chinese translator displayed less concern in this regard and intentionally emphasized the importance of structure.

As a result, although *kekkō* effectively conveys the meaning of tectonic within the architectural context, its everyday use, which deviates from its architectural connotations, introduces a potential disturbance at the outset. As a relatively new term, *jiàngòu* manages to circumvent this issue. However, although its emphasis on a broad interpretation may encourage a wide range of applications that are not limited to architecture, *jiàngòu* has evolved into a term that does not strictly align with the original concept of tectonic. Furthermore, although the intentional emphasis by the Chinese translator on the correlation between tectonic and structure may have facilitated a simplified comprehension of tectonic during its initial dissemination in China, it likely contributed to the rapid spread of *jiàngòu* as an architectural term.
These discussions elucidate that the Chinese edition reveals the ambition of the translator to generalize the term *jiàngòu* with a likely concern for the widespread adoption of this new terminology

at the onset; this inclination is in contrast to that of the translators of the Japanese edition, who intended to faithfully adhere to the original text.

The differing intentions of the Chinese and Japanese translators stem from their respective contexts. In China, where there is a prevalent inclination toward stylistic and visual portrayals of buildings, Wang aimed to resist this trend by introducing the concept of tectonic to reorient focus toward materiality. In contrast, in Japan, the emphasis on structures and construction, driven by the necessity to mitigate natural disasters, remains constant. Consequently, the introduction of tectonic in the Japanese context did not need to bear the burden of reorienting the scope of existing architecture. Additionally, although Matsukata chose *kōhō* to translate construction, *kōhō* is a broad concept. *Kōhō*, in a broad sense, can be linked with nearly all the materiality aspects of architecture. Meanwhile, the inconsistencies in translating construction, structure, and building in the Chinese edition reflect the absence of a term that can serve as a counterpart to the concept of *kōhō*. To a certain extent, *jiàngòu* has filled this void in China due to its capacity to encompass new interpretations. The developmental disparities between *jiàngòu* and *kekkō* suggest that successfully establishing a new terminology relies on two requirements—a prevalent contextual demand and a translation that fosters potential new interpretations rather than mere precision.

Notes
1. Kenneth Frampton, "Reflections on the Scope of the Tectonic," trans. Yasuhiro Minami, *10+1*, no. 16 (March 1999): 129–54.
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Image Captions
Fig. 1. Network of connections among Chinese, Japanese, and English terminologies. Source: author.

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Biography
Ye Chen PhD in Engineering at Nagoya Institute of Technology, Japan, Master in Architecture at Tongji University, China, Master in Engineering at Nagoya Institute of Technology, Japan. She is currently assistant professor at the Nagoya Institute of Technology, Tsukuri College, Graduate School of Engineering. She has formerly worked as an architectural designer at Tongji Architectural Design (Group) Co., Ltd. Her interest centers on conducting comparative studies of architectural design and theories between China and Japan, exploring regional variations in architectural construction, and examining the cultural correlations associated with them.

Reima Pietilä and the Morphology of Architectural Language

Cortés Sánchez, Luis Miguel
University of Sevilla, Department of Architectural History, Theory and Composition, School of Architecture, Seville, Spain, lcsanchez@us.es

Abstract

The development of the morphological component of language has characterised Reima Pietilä's work from her theoretical reflexions to the very understanding that the project results from a process of exploration between the imaginary and words. These neologisms translated into unprecedented concepts have served as a way of explaining highly complex design processes that are still highly relevant today, six decades later.
This alteration of the Finnish language, based on the addition of prefixes or suffixes, or even proposing new nomenclatures, has served as a vehicle for reflection - dissenting from the design methodologies that characterised the contemporary architectural period of the mid-twentieth century - by Reima Pietilä himself.
This avenue of exploration has served, from his first exhibitions and publications in *Le Carre Bleu* and *Arkkitehti*, such as *"The Zone"* (1, 1968) published in the latter where he expressed the need to develop new terminologies that express what he really thinks as an architect, even advocating the creation of a new Finnish terminology; even the use of this semantic methodology for the elaboration of the pseudonyms under which to present proposals for architectural competitions; as a key to access the understanding of the architectural project and thus be able to delve deeper into the work of Raili and Reima Pietilä.
This reflection aims to highlight the power of the Pietilä's use of language, analysing how, through the pseudonyms *"Hellitä Mäkivyötä meridiaani"* (Be gentler, mountain zone meridiaani), *"Luolamiesten häämarssi"* (Wedding march of the cavemen) and *"Tuohivirsut juoksuhaudassa"* (Strips of birch bark in a dug-out), under which they won the three respective competitions for the Kaleva Church (1959), the Dipoli project (1961) and the Suvikumpu residential complex (1962); these have the capacity to reveal the architectural character of the work through the morphological alteration of the language by touching on themes that establish a network of connections between culture, landscape, and architecture.

Key words: Pietilä, language, Finnish, architecture, design.

1. Contextualisation of the scene of change.
The presence of Reima Pietilä (1923-1993) as an architect and dissident critical thinker on the Finnish and international architectural scene became significant in the second half of the 1950s. From this time onwards, Pietilä began to develop new theories of exploration that began to distance himself from the current architectural trends of the time by proposing new models of thought.

Reima Pietilä's motivation for reflexion and humanistic knowledge was present from her late teens. Thus, at the age of seventeen, in addition to his basic education, he attended various courses at the University of Turku, completing his humanistic studies. Within this series of lectures, the one given by Paavo Ravila on "Finno-Ugric peoples", in which Ravila combined philology and ethnology, brought Reima closer to the culture of the Finno-Ugric languages, their words, and meanings. Paavo's passionate way of teaching had a profound influence on Reima, who said that the idea of the magic of words remained engraved in his subconscious forever.[1]

The Second World War and the end of wartime stability between Finland and Russia meant that Pietilä had to do military service, and it was not until 1945 that he was finally able to begin studying architecture at the Helsinki University of Technology. Already as an undergraduate under the supervision of Professor Johan Sigfrid (Jukka) Sirén, he displayed a critical and reflective attitude towards architecture and its processes. Pietilä found in writing the means to express his ideas; these small texts would later be disseminated through the architectural magazines of the time.

Within his early narrative output, one of the first texts of any significance was the three-section article entitled "*Haudatut koirat - Muodon muoto - Harjoitelmat*" (The form of - Change of Form - Exercises) published in issue 4 (1957) of the journal Arkkitehti, where Pietilä revealed his interest in morphology, architectural theory, and linguistics. At that time, Reima concluded that the Finnish language and even languages in general, were insufficiently developed tools for describing the sinuous and interconnected process by which architecture acquires form. Thereafter, he began to develop his own revised terminology with the aim of describing the essential nature of architecture and the process by which it emerges. Juhani Pallasmaa has revealed that on several occasions, in conversations with Reima Pietilä, the latter showed him his initial intention to study philology rather than architecture[2], and also stated that Pietilä thought of himself as a "linguist who did architecture".[3]

> "My architectural career has an additional feature in that originally my intention was to study philosophy and perhaps my basic attitude has always been an attempt to add a philosophic aspect to the pragmatic orientation."[4]

In the second half of the 1950s, after his victory in the competition (1956) for the Finnish pavilion at the 1958 World Exhibition in Brussels, the attention and interest in his work grew considerably due to his new interpretations and stances on the architectural movements of the time, opening the field of work to new and unexplored paths. He himself abandoned the interest in the mathematical module present in his early projects for new interests in free form, morphological studies, and the Finnish language.[5]

The language and the terminological and verbal descriptions had a direct impact on Pietilä's approach to the project. In several interviews, Pietilä has had to elaborate on this aspect, which at the time was completely exceptional. In his interview with Marja-Riita Nori, when she asked him about the link between architecture and language and the development of the Finnish language to make it more suitable for the discussion of architectural theory through the creation of neologisms, he replied as follows:

> "Creating architecture is a multi-media process. It involves verbal programming and directing, visualization by sketching floor plans, sections, elevations; spatialization with the help of a scale model; materialization by building. Both words and pictures are used to explain architectural form. Neither one nor the other alone is enough to make architecture as a phenomenon sufficiently comprehensible. […] I imagine that the verbal and the non-verbal are the polarities of the message – communicative form axis. My interest centers around the middle part of this axis. There I imagine, I am able to find my ideas and sketches; the outlined language of form […] I talk whilst I draw – the rhythm and intonation of Finnish govern the movements of my pencil."[6]

Reima Pietilä's critical work led to his active participation in critical circles and international debates on architecture as a member of Team X and as a member of the Finnish section, called PTAH (*Progrès Technique Architecture Helsinki*)[7]. Pietilä's first published reflections can be found in the *Arkkitehti* magazine. More decisive, however, was his role as editor, together with Aulis Blomstedt and Keijo

Petäjä, of the magazine *Le Carre Bleu*. His starting point for the magazine was in 1958, a time when modernism was in crisis with the fading interest in CIAMs and Le Corbusier's model, a turning point in the dynamics of architecture at the time. As one of the editors of the magazine, Pietilä was able to direct the focus of the magazine towards his interests and concerns. The study of form became the editorial focus with the aim of countering what they perceived as the main culprit in the demise of modern architecture: the dogma that form follows function[8]. *Le Carre Blue* became a support for the architectural debate of the time, freed from the constraints of functionalism and modernism, giving space and a voice to the new generations of architects who rejected modernist dogmas.

Barely two years after the inauguration of the magazine, Reima published one of his most famous reflexions on its theoretical development: *"Études de morphologie en urbanisme par Reima Pietilä"* in issue 3 (1960). A series of graphic compositions aimed at showing a narrative or project combining multiple forms, this text served as the final result of previous texts published on the processes of alteration of form[9]. The new methodology proposed by Reima was not only disseminated through his projects and works, but, due to his very active role as a writer, numerous texts were published in magazines where he expressed these thoughts. However, these ideas were also disseminated through exhibitions. The trilogy: *Morphology-Urbanism 1960, Vyöhyke (The Zone) 1967, Tilatarha (Space Garden) 1971*, dealt with the evolution of his thinking.

2. Search for new channels of exploration.
Reima Pietilä's remarkable conceptual ability allowed her to address all these ideas and theoretical reflexions through a great versatility of media and channels. From writing to graphic compositions to the construction of physical models. All this could be perfectly identified through the exhibitions designed and curated by him, exhibitions composed of illustrations, models, silkscreens, a wide visual and sensorial communicative system where we see how the reflexion on language begins to acquire a special prominence, especially from the second *"Vyöhyke (The Zone)"*.

The first exhibition in this trilogy was *"Morphology and Urbanism"*. It opened at the Pinx Art Gallery in June 1960 and was a statement of intent. Firstly, by choosing an art gallery as the site for the exhibition. Pietilä wanted to break with preconceived ideas about how and where architecture should be discussed; introducing this architectural debate into the heart of an art gallery implied the consideration of understanding architecture in relation to the rest of the arts, extending its horizons beyond dogmatic functionalism[10]. This was something completely new, as there were no architects in Finland at that time who conveyed their thoughts on architecture in this way, both graphically and linguistically. In this exhibition, he continued the ideas developed in the publication "*Études de morphologie en urbanisme par Reima Pietilä*" in issue 3 (1960) of Le Carre Bleu magazine.
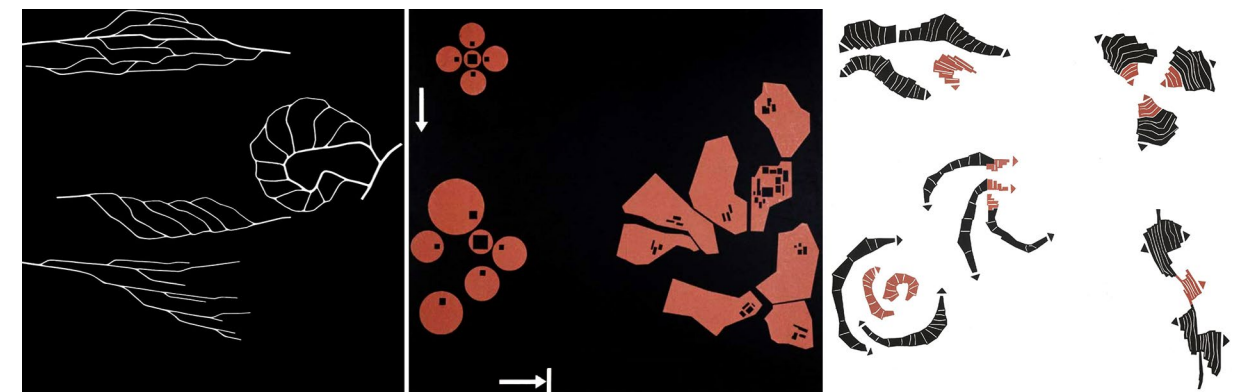
Fig. 1

The exhibition consisted of twenty-nine 96x104cm panels. These panels moved away from classical architectural representations and were replaced by new, abstract compositions in which Pietilä invited us to reflect on the interaction between urban space, architecture, and landscape through form (Fig. 1). The exhibition was also intended to act as a critique of urban development models that were being carried out in an incoherent manner and destroying the environments in which they were located[11]. The lack of definition of scale, hardly any data such as graphic scales or measurements appeared, allowed the viewer to make his or her own personal interpretations without external conditioning factors.

A few years later, in December 1967, Reima Pietilä, already together with her partner and partner Raili Pietilä, opened the exhibition *"Vyöhyke (The Zone)"* in their studio on *Korkeavuorenkatu Street* in Helsinki. This exhibition, following the lines initiated in the previous one, continued to reflect on urban

morphological studies through abstract graphic compositions, but this time it incorporated a new element in a more obvious way: language. Synchrony between visual and the auditory, form, and language, was the main theme of this exhibition[12]. On this occasion, the installation consisted of forty 2.5x2.5 metre transparencies, suspended from the ceiling of the spacious studio rooms, which reached a height of 5 metres[13].

The exhibition was published in issue 1 of Arkkitehti magazine in 1968. In that issue, Reima Pietilä wrote a short introductory text explaining the meaning behind the title of the exhibition and the thinking behind it. This "Zone" referred to is the space where two fields of architecture converge: theory and practise, i.e., research and its application. Reima defended the need to use both in order to obtain good results, the proof of which was this exhibition that showed the transition zone where theory becomes reality. His aim was to build an architectural theory that would allow a comprehensive approach to the task of building, seeking to create an independent theory that would add to the existing ones and give rise to new forms of architecture[14]. For him, the exhibition was a tool with which to study the way in which forms transmit and produce meanings and associations, also from the tool of language, through the search for words and concepts that had a link with the illustrations, which is why each illustration was accompanied by a small text (Fig. 2).
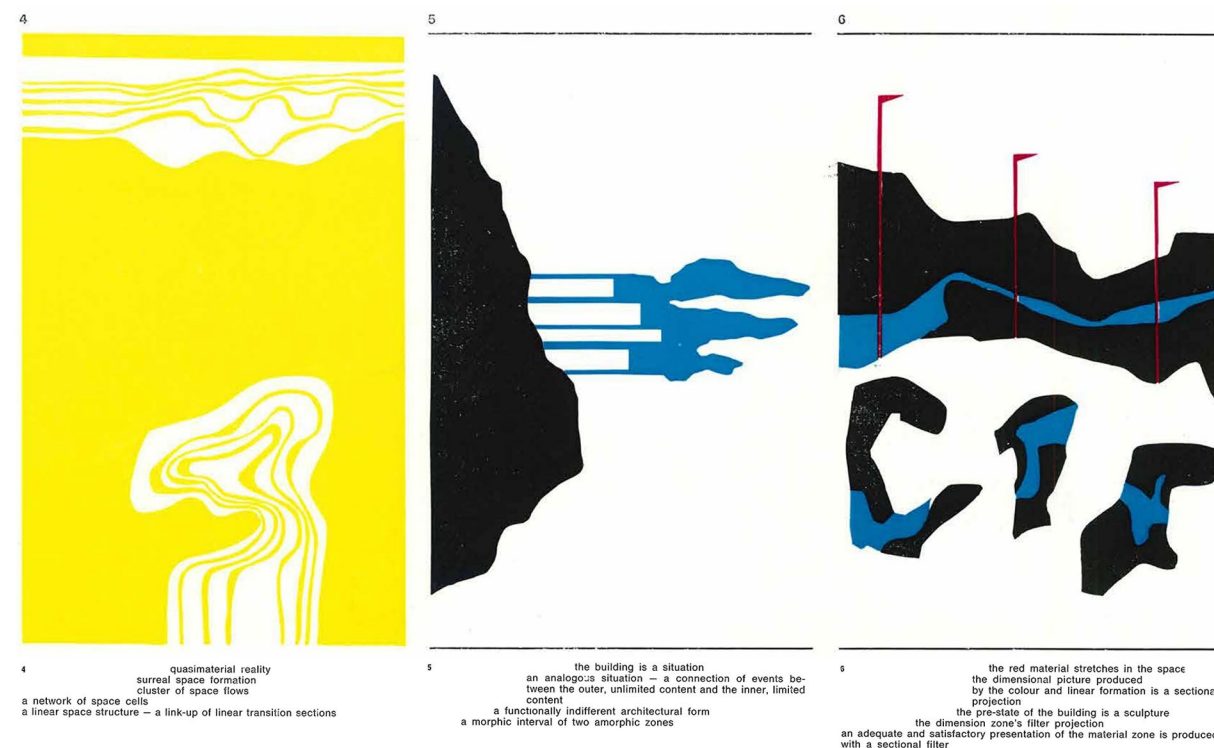
Fig. 2

"The language of architecture also has its own language. The explanations to the exhibition pictures give a suggestion of this. New terminologies are applied. The languages of different disciplines are set side by side. The captions have five of such explanatory backgrounds. I use a Finnish architectural terminology which is full of new phrases, combinations, and even words. I think this is right, because there is no other way for me to express what I really think as an architect. Every architect should do the same. We must work up a whole useful new Finnish terminology. This must lead to a uniform architectural vocabulary."[15]

The last exhibition in this exhibition trilogy was *"Tilatarha (Space Garden)"*, shown at the former location of the Museum of Finnish Architecture (Puistokatu 4, Helsinki) from 21 April to 12 June 1971. The exhibition was the culmination of Raili and Reima Pietilä's theoretical reflexion on the genesis and meaning of form. In this exhibition we can see how language took on a greater presence than in the other exhibitions, forming part of the compositions themselves and constructing their discourse.

The exhibition consisted of twenty-five curved acrylic panels that were the support for the compositions of illustrations and texts (Fig. 3). The panels were grouped together to create concave and convex paths and spaces in an apparently random but, nevertheless, completely studied manner. The viewer is physically immersed in an environment of images and language. The exhibition

abandoned the two-dimensional plane that characterised the previous two exhibitions to become a three-dimensional development in which to immerse oneself[16]. Each of these groupings responded to a concept; in total there were seven: "Typological space", "Space of light", "Space of contrast", "The forest as space", "Regional space", "Space of urban events", "Fundamentals of the environment".

Fig. 3

"I think in my native language Finnish. I talk whilst I draw – the rhythm and intonation of Finnish govern movements of my pencil. Do I draw in Finnish? My language rhythm influences my drawing shapes, phrases my lines, outlines my surfaces. The local cases and regional vocabulary of the Finnish language are the elements of my genuine way to express topological architecture and space. A picture from the Space Garden exhibition concerns this. In a couple of the other panels there are examples of how the Finnish language is able to generate neologisms when such a need arises. There is still much use for a new vocabulary and working language in architectural modernism."[17]

Again, the title of the exhibition already announced beforehand that the choice of the word "garden" in the title was to describe the colourful and multisensory visual world.

The three exhibitions together allow us to trace the methodological and theoretical development of Reima's work, initiated by Reima in the late 1950s and later developed together with Raili, from his first approaches to urban morphology to its interaction with the natural environment and the urban environment, and with its significance in terms of language, as well as the importance of the latter as time goes by.

During the decade of the 1960s and early 1970s in which these exhibitions took place, they transferred these ideas to the field of architectural design where they put them to the test, in the same way as they advocated in The Zone exhibition, creating a period of architectural experimentation based on the theory of morphological design.

3. The use of language in the design process.

Today I imagine the words of countless
Languages to be suddenly fetterless –
After long incarceration
In the fortress of grammar, suddenly up in rebellion,
Maddened by the stamp-stamping
Of unmitigated regimented drilling.
They have jumped the constraints of sentence
To seek free expression in a world rid of intelligence,
And ridicule of literary decorum...

Artistic creations
Of a kind that do not conform to an orderly
Universe - whose threads are tenuous, loose, arbitrary…

In my mind I imagine words thus shot of their meaning,
Hordes of them running amuck all day,
As if in the sky there were nonsense nursery syllables booming -
Horselum, bridelum, ridelum, into the fray.

Rabindranath Tagore, Lines from "On My Birthday - 20". *Selected Poems*, trans. William Radice. London: Penguin, 1985. [18]

With an excerpt from the poem *"On My Birthday - 20"* by Rabindranath Tagore, Roger Connah begins his article in issue 6 of Arkkitehti magazine dedicated to Reima Pietilä in 1993, the year of his death. Words, meaning, and imagination were the main themes that characterised the methodology of thought developed by Reima throughout her career. Until his last days, and as Roger tells us, this method based on writing and creating small texts, small narratives, which might seem to be meaningless, was altered and modified again and again these ideas, with different looks balancing between language and image.

Reima's approach to concepts went beyond their meaning. In numerous interviews, Reima Pietilä approached the answer to questions about concepts from the point of view of semantic and lexical analysis. In Kaisa Broner's interview with him published in Arkkitehti magazine, issue 6 (1993), we can witness one such example. Reima's answer to the question about the concept of constancy is as follows:

> "Now we are talking about design constancy. I cannot define this term without first looking up the word in a dictionary. *Con-stare* comes from the verb stare, to be, that is, to be "equipped with existence". This dictionary translates *stare as to stand for, to stand*. Status means a kind of being, or something presenting its essence of being by acting in a certain way. Hence, by erecting a church building, one can act out the essence of a church. Thus when man build objects constants. They Have the right to an existence. An object, possessing by its very nature the right to an existence, is a constant. So I have defined now: the right to an existence of one's own."[19]

This clearly shows Reima's approach to language and how he constructed concepts, giving them a meaning beyond the figurative.

This first period of work in which Reima worked together with Raili during the 1960s was extremely fruitful at the architectural level, with the winning of a number of major competitions, most of which were built, and where they applied the theoretical reflections developed previously, especially those revolving around morphological design. It should be noted that most of the texts published were signed by Reima, hence the authorship of these texts is attributed to him alone. However, the projects developed from the 1960s onwards were co-authored by Raili Paatelainen (maiden name until her marriage to Reima in 1963).

This period was driven by the reinterpretation and transformation of the Finnish landscape and nature, especially the Arctic ice age. Raili and Reima Pietilä found the starting point in the imaginary of Finnish nature. Going back to the Arctic ice age and its geological component, which has conditioned the final landscape as we know it today, has been the germ of the vast majority of the couple's projects. In Pietilä's architecture there is always a space reserved for Nordic traditions and, consequently, for the Finnish natural landscape, a constant present throughout their career[20]. These elements included forests, landscapes, ancient rock formations, clouds, sky, snow, ice, terrain topography, and even animals. Pietilä's architecture sought to "imitate" the morphological characteristics and spirit of place, known as *genius loci*, through the use of metaphor - it was not a literal imitation[21]. The forest also acquired importance as another element shaping the landscape. Pietilä found in the forest all the volumetric parameters of this environment for its reinterpretation and application to architecture.[22]

> "The title, the gesture, moves -speaks- in both ways. The title orients and occidents, takes us before and after, backwards and forwards; it brings one place to another as each other. Designers title their work. Design work is entitled to such a gesture. Work, a work, holds gestures of the design actions that make it work. This, as Reima Pietilä says, is part of the "naming game". The name does not simply announce an object. It announces action – the actions of playing things out with humans caught up in them, as part of them: universal environmental relations are what we are part of a which architecture gesturally mediates".[23]

Three competitions, three first awards, and three projects. The pseudonym under which each of the three proposals was presented in each competition perfectly synthesised the architectural character of each of the proposals. The language tool, as part of the design process, was present in each of the projects. The Kaleva Church in Tampere, the Dipoli project in Otaniemi, and the Suvikumpu residential complex in Tapiola reflect very well the reflection here. Each slogan acted as a preamble to the architectural event.

Kaleva Church: Hellitä mäkivyötä meridiaani (Be gentler, mountain zone meridian)

Dipoli: Luolamiesten häämarssi (Wedding march of the cavemen).
Suvikumpu: Tuohivirsut juoksuhaudassa (Strips of birchbark in a dug-out)

The first of the most representative projects of this period and one that had a great impact was the Kaleva Church in the city of Tampere. *Hellitä mäkivyötä meridiaani* (*Be gentler, montain zone meridian*), under this pseudonym, Raili and Reima Pietilä presented their proposal for the Kaleva Church in Tampere, which won out over the other proposals submitted.

Built between 1959 and 1966, the project began with the analysis of the interaction between landscape and architecture, especially from the topographical component. The slogan already introduced the topographical component from the term mountain, and the search for its interaction with the existing landscape from an attitude of "gentleness". The project was conceived as the consecration of the existing mound, with the creation of a final resting space - the church - after a route of ascent to it, also providing a component of religious symbolism on the ascent route[24]. Raili and Reima defined the architectural character of this project as an experiment in convex-concave morphology: a modern attempt to remain in the spirit and tradition of Gothic and Baroque without its stylistic limitations.[25]

This strategy based on topographic and geological reading became a constant and also served as a starting point for the Dipoli projects and the Suvikumpu residential complex. In the case of Suvikumpu, it was developed during the same period 1962-1969[26]. The morphological keys to the project again lay in the vegetation and topography. Under the theme: *Tuohivirsut juoksuhaudassa (Strips of Birchbark in a dug-out)*, Raili and Reima Pietilä designed a proposal in which topography and vegetation dictated the keys to the project.

The existing hill, which served as a shelter and trenches in World War II, hence its use in the title of the pseudonym, modulated the volumetry of the proposed buildings. Growing in the higher areas and decreasing in the lower ones, the volumes were adapted to the topography in order to seek a harmonious relationship between the forms of the site. Vegetation also had an impact. Raili and Reima Pietilä reinterpreted the strips of birch bark, identifying a geometric pattern that they transferred to the building envelopes. In this way, they created a geometric form and geometric link with the existing vegetation[27]. As the pseudonym announced, the World War II trenches and birch bark were the components of the site that were most reflected in the project's strategy. Suvikumpu is a forest architecture in which the layout follows the contours of the rock, and where the meticulous sensitivity of the green in the building is a replica of the form and space of the forest: spruce green, pine green and birch green.[28]

This morphological key based on geology and vegetation also served as the starting point of the project for the Helsinki University of Technology student association, the Dipoli project. Coetaneous with the final phase of the construction of the Kaleva church and the Suvikumpu residential complex. Raili and Reima Pietilä were awarded the final contract for the development of the project and its construction in 1961-1966. Situated in the middle of the forest that characterised the Otaniemi peninsula, on one of the small mounds that were to follow one after the other along the peninsula, Pietiläs delved deep into the geological morphology of the terrain.

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Fig. 4

The look at the Arctic ice age and the reinterpretation of this space as ancient caves were the components that gave the competition's pseudonym its title: *Luolamiesten häämarssi (Wedding march of the cavemen)*. The geological component, as well as the pine and birch forest, formed the strategy of the project. The project aimed to be that cave in which sacred activities - as they exemplify

weddings - take place. The building was intended for the university students, it was their most important space, a meeting place where they could socialise. The project is excavated in the rock, lifting the existing rock to create a roof that protects and shelters the "cavers"[29]. It is a two-way path in which the building seeks to immerse the place by means of an exercise in the morphology of the mineral world in which, at roof level, the granite shield of the site, originally from the glacial period, is simulated. The interior-exterior is an exercise in forest morphology where the space penetrates the interior as a forest continuity[30]. In Pietilä's sketches, where he develops these ideas, we see the interaction between two realities and how they finally converge in a single building (Fig. 4). It is an architectural idea that contains a thought; it does not need a contracted formal representation at the beginning. Federico Soriano has developed this theory in favour of an architecture without form: "This idea will link all the elements and parts that the project must take into account. It becomes a key authorising factor in the choice of the various dilemmas that arise in any phase of its development. From the moment we can see this idea, we can know what any detail will be like, a window, the floor plan, the meeting with the ground".[31]
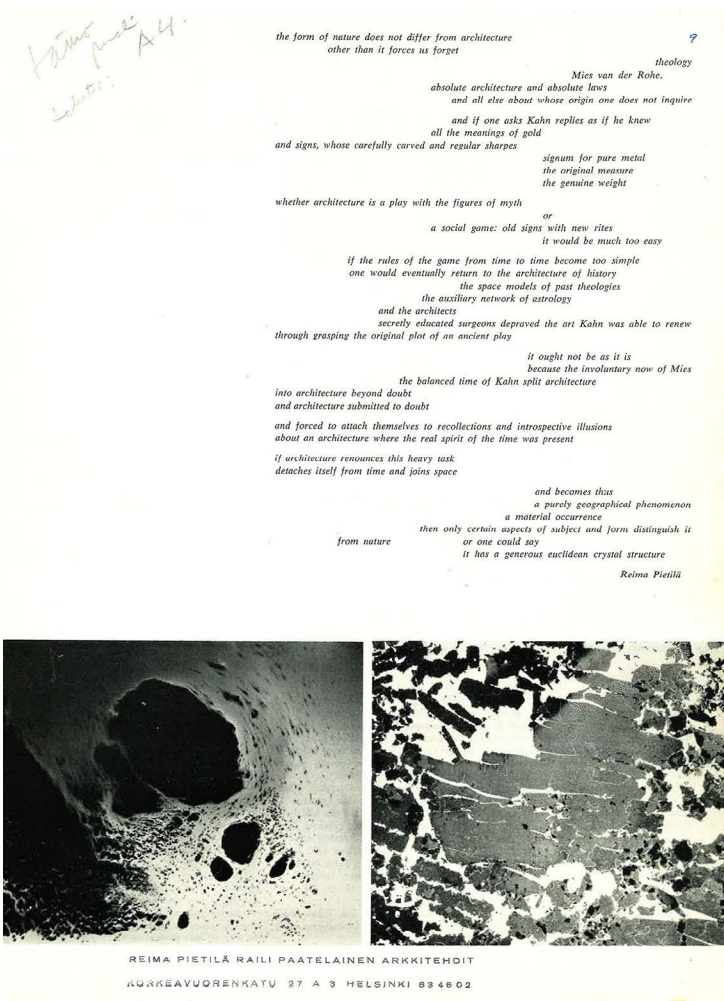
Fig. 5

This exercise in morphology was described in the "poem" that Raili and Reima Pietilä published in issue 1, vol.46 (1964) of the journal *Byggekunst* in a text entitled "Dipoli: Building or Natural Form?" (Fig. 5) where they described the significance and genesis of the architectural work, again using the tool of language as they conceived it, as something beyond the simple composition of a paragraph. Although they focus on the morphology that defines Dipoli's project, this text is very convenient in the context of his entire oeuvre of this early period.

                                        and thus becomes
                                        a purely geographical phenomenon;
                          a material occurrence;
                    the only certain aspects of subject and form distinguish it;
from nature   or one could say
                    it has a generous Euclidean crystal structure
                                        Dipoli: Building or Natural Form? Reima Pietilä [32]

4. Conclusions

As Reima Pietilä responded to Kari Jarmakka in her interview, where she was asked about the process of creating neologisms: "Perhaps the secret of design is that when a new word is coined, things can start to make sense. The concept of design develops a little more, and new functions can be discovered as a result of new conceptual formations".[33]

The creation of new terminologies to be able to talk about and reflect on new architectural concepts has continued to develop over the course of time; perhaps the experiences reflected here through the work of Raili and Reima Pietilä are among the first experiences with a complete process - from theory to practise - in the last century, but today this search for "naming" new concepts and new approaches is present in contemporary architecture. The publication of the Metapolis[34] dictionary is a clear reflexion of this, where the need to create new terms, as well as their resignification, contributed to the need to create a new dictionary in which to express this different approach to architecture. Perhaps Reima did not create a dictionary in its entirety, but there is no doubt that his neologisms serve as a tool with which to delve into his thoughts, reflexions, and architecture.

Notes

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9. Reima Pietilä, "Tranformations," in Arkkitehti, no. 6-7 (1956): 103.
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13. Aino Niskanen, "The Pietilä's Other Half," Arkkitehti, no. 6 (2004): 28.
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15. Reima Pietilä, "The Zone" Arkkitehti, no. 1 (1968): 51.
16. Eeva-Liisa Pelonkonen, Exhibit A: Exhibitions That Transformed Architecture, 1948-2000, (London: Phaidon, 2018), 149.
17. Marja-Riitta Norri, and Reima Pietilä. "Architecture and Cultural Regionality. Interview with Reima Pietilä," in Pietilä: Modernin Arkkitehtuurin Välimaastoissa: Intermediate Zones in Modern Architecture," ed. Marja-Riitta Norri and Roger Connah, (Helsinki: Suomen rakennustaiteen museo, 1985), 8.
18. Este poema fue publicado de forma parcial como introducción al artículo escrito por: Roger Connah, "Reima Pietilä, 1923-1993," Arkkitehti, no. 6 (1993): 32.
19. Kaisa Broner, "ARCHITECTURE AND THE RIGHT TO AN EXISTENCE. An interview with Reima Pietilä," Arkkitehti, no. 6 (1993): 36.
20. Torre Colombera, Raili e Reima Pietilä: L'architettura Sconosciuta = an Unknown Architecture, (Vercelli: Gallo Arti Grafiche, 1997), 9.
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24. Luis Miguel Cortés, "Viljasiilo. La Iglesia Kaleva de Raili y Reima Pietilä como hito paisajístico," in En Blanco. Revista de Arquitectura, no. 34 (2023): 131. https://doi.org/10.4995/eb.2023.18035.
25. Notes from the catalogue of dossier no.3 of the Pietilä collection in the archive of the Museum of Finnish Architecture (Helsinki).
26. A second phase was developed between 1981-1982 for a new residential building and a small commercial pavilion at the entrance to the site.
27. Roger Connah, Writing Architecture: Fantomas, Fragments, Fictions: An Architectural Journey through the 20th Century, (Helsinki: Rakennuskirja Oy, 1989), 238.
28. Notes from the catalogue of dossier no.9 of the Pietilä collection in the archive of the Museum of Finnish Architecture (Helsinki).
29. Luis Miguel Cortés, "El Proyecto de Dipoli. Respuestas Al Paisaje Desde La Forma y La Materialidad." In Libro de Actas - X Congreso Internacional Arquitectura Blanca, 198–207 (València: Editorial Universitat Politècnica de València, 2022), 201. https://doi.org/10.4995/CIAB10.2022.14000
30. Notes from the catalogue of dossier no.6 of the Pietilä collection in the archive of the Museum of Finnish Architecture (Helsinki).
31. Federico Soriano, "Arquitectura sin forma," in Revista Fisuras, no. 2 (1995): 78.
32. Reima Pietilä, "Dipoli: Building or Natural Form?" in Byggekunst, no. 1 (1964): 9.
33. Kari Jormakka, "An interview with Reima Peitilä", Arkkitehti, no. 6 (1993): 45.
34. Manuel Gausa, Diccionario Metapolis Arquitectura Avanzada: Ciudad y Tecnología En La Sociedad de La Información (Barcelona: Actar, 2001).

Image Captions

Fig. 1. Selection of graphic compositions from the exhibition "Morphology and Urbanism" 1960. Reima Pietilä. Source: Pietilä collection, archive Museum of Finnish Architecture (MFA).
Fig. 2. Selection of graphic compositions from the exhibition "Vyöhyke (The Zone)" 1967. Reima Pietilä. Source: Pietilä collection, archive Museum of Finnish Architecture (MFA).
Fig. 3. Left: Reima Pietilä with members of the studio previewing the exhibition "Space Garden". Centre: Model of the exhibition "Space Garden". Right: Photograph of the exhibition "Space Garden". Source: Pietilä collection, archive Museum of Finnish Architecture (MFA).
Fig. 4. Sketches by Reima Pietilä for the Dipoli project, source: Pietilä collection file number 6, archive Museum of Finnish Architecture (Helsinki). Last plan right, roof plan of the building, authors and source: ALA Studio.
Fig. 5. Poem by Reima Pietilä, published in issue 1, vol.46 (1964) in the journal Byggekunst entitled "Dipoli: Building or Natural Form? Images by Raili Pietilä. Source: Pietilä collection, archive Museum of Finnish Architecture (MFA).

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Biography

Luis Miguel Cortés Sánchez (Don Benito, Spain, 1994). Architect. Graduated in Fundamentals of Architecure (2017) and master's in architecture (2018) by the ETSA of Seville, receives the Extraordinary Prize End of Studies of the course 2016/17. Continuing with his research work that begins in 2018, it is in 2020, when he gets a predoctoral contract (FPU) through the Ministry of Education that allows him to enter the Department of History, Theory and Architectural Compositions of the ETSA of Seville, as well as to begin his career as a teacher in that department. Member of the research group "City, Architecture and Contemporary Heritage", currently developing his PhD thesis focused on the material relations between architecture and landscape.

Nostalgia for Backwardness
Investigating the Persistent Influence of Modernity on Brazilian Contemporary Architecture

Costa, Frederico

UNICAMP/FAPESP, Architecture, Technology, and City Postgraduate Program, FECFAU, Campinas, Brazil,
f060950@dac.unicamp.br

Abstract

The term "Backwardness" ('Atraso'), as commonly used in Brazil, has a long tradition in local social thought and is used to refer to a diversity of social and material elements of the past considered obstacles to modernity. While overcoming backwardness has been repeatedly emphasized as a goal of Brazilian Modern Architecture, the negative consequences of modernization produced a curious inversion in contemporary architecture. Instead of embracing a general renewal of approaches and repertoires that revive the transformative spirit of the avant-gardes, Brazilian contemporary architects have increasingly reinforced the canonization of historical forms and practices from the era of national high modernism. This trend is strongly linked to national identity, and while modernism itself may not easily be recognized as backwardness, it takes on a new significance as an idealized past, evoking nostalgic symptoms. Thus, contemporary architecture exhibits discernible patterns and variations that indicate a shift in the perception of Backwardness. If in the past it represented a discomforting sensation, today it signifies a nostalgic desire of rescuing the engaged principles of modernism, threatened by undesired consequences of modernization and challenged by new critical perspectives that questions the very concept of modernity.

Key words: Backwardness, Brazilian Contemporary Architecture, Nostalgia, Modernity.

The term Backwardness was constantly cited by the social sciences in Brazil. The colonial period established a perspective of temporal distancing and difference in relation to Europe, which was supposedly at the right time or ahead of time.[1] Consequently, the future would be palpable, all that was left was to choose which path to reach it as quickly as possible. Signs of backwardness were seen as obstacles that separated Brazil from its (foreign) destiny, but could also be seen as advantages, that is, particular aspects that defined Brazil as an independent and unique nation[2]. This was the conceptual engine that animated the cultural avant-guard in Brazil and Latin America.[3] Brazilian Modern Architecture was the combination of European modernist principles with national traits, almost always related to the colonial past, productive limitations, or the immemorial tropical landscape. Over time, this architecture ceased to represent a modern novelty, to become a reference source of the past. With the "end of history"[4], contemporary architects in São Paulo faced an end-of-the-line situation.[5]

In a few moments in the history of Brazilian architecture, the contrast between the Brazilian Pavilion and the omnipresent high-tech neo-futurist optimism of the 1970 Osaka Universal Exhibition (Expo 70) was highlighted. Designed by architect Paulo Mendes da Rocha (1928-2021) and his team, it was the first time that the event was held in an Asian country and technological optimism reverberated with recent events in the Space Race, such as the Moon landing in 1969.

Like the Brazilian Pavilion, the main building of the Expo, the Festival Plaza, was also a large roof, consisting of the Symbol Zone, crossed and supported by the charismatic Tower of the Sun. Designed by architect Kenzo Tange (1913-2005) and with Arata Isozaki (1931-2022) as a member of the team, it was the focal point of the Expo and also functioned as a large covered area. The similarities, however, didn't go much further than that. Despite the same motto, but with an obvious difference in scale and hierarchy, the contrast was mainly in the structural aspect and, consequently, in the expressiveness of innovation through techniques and materials.

Although both intended to demonstrate lightness in the suspension of the roof, the Brazilian Pavilion, in concrete, supported the roof beams on artificial hills, in addition to an iconic portico with two crossed arches. These beams had curved shapes that express the structural efforts along their length. The inconstant arrangement of the supports provided a plastic dynamism analogous to the curves of the artificial hills on which they were supported. The solution thinned the beam profile at the ends and between the gaps. This variation in thickness gave it a fluidity as if the material were animated or could be manipulated by the wind or by a vital force of its own. Despite all this illusion of lightness and vitality, concrete appears the way it was cast, gray, hard, without finishes. The appearance is rustic, the feeling of heaviness is perceptible, and, despite the transparent openings in the roof grid, the photographic records suggest a shaded space.

In the case of the Symbol Zone roof, the sensation of weight is less intense and seems to be evenly spread throughout the space frame, forming a diaphanous, continuous, and flexible grid, which rose through the pillars and extended along the suspended plane.

The solemn and austere aspect of the Brazilian Pavilion contrasts even more with the Tower of the Sun, the centerpiece of Festival Square. The vitality in this case is more literal and figurative. The tower is a colorful mascot-like building with anthropomorphic features and three serene sculptural solar faces representing the past, present, and future.

The Brazilian pavilion, however, did not contrast only with Festival Plaza. The vast majority of pavilions in general, from northern to southern countries, on either side of the Cold War, exuded a futuristic enthusiasm that was expressed in light structures, new materials, new construction technologies, aerodynamic and complex shapes, and vibrant colors.

Although the team of Brazilian architects recognized technological innovations in concrete, the material was no longer being recognized at EXPO as an up-to-date expression of time or the future. They admitted that "[...] the project also emerged from this historical vision. It contains the study and knowledge surrounding the work of Niemeyer, Lúcio Costa, Artigas, and many others that today form a broad and differentiated group of Brazilian contemporary architects, no less universal for that reason".[6] Even without admitting it, Brazilian architects recognized Brazil in a peripheral and underdeveloped position, similar to countries like Argentina[7], but, precisely for this reason, and contrary to expectations, they deliberately chose to present their backwardness as an advantage.

The interest in the Brazilian Pavilion at Expo 70 has grown nowadays as its symbolic role in legitimizing the production of contemporary Brazilian architecture has become clear. Despite its intrinsic qualities and the press coverage since its realization, a recent revival[8] and international interest in the work of Paulo Mendes da Rocha[9] reinforce the pioneering role of the pavilion in the trajectory of the architect who became the main intellectual reference of a new generation of contemporary architects in Brazil, especially in São Paulo. This new generation became known for its effort to promote the tradition of Brazilian Modern Architecture in their practical and theoretical production.

Just as the Brazilian Pavilion in Osaka had represented the refusal to surrender to foreign influences on that occasion, it lent to the new generation an important historical alibi to justify its own refusal to review the principles of modern architecture in contemporary times. Refusal in favor of a kind of "critical

backwardness" against foreign influences, but also in response to national and international ideological and political changes after the end of the Cold War.

The attitude of refusal itself has historical roots that go back to the peculiar and contradictory emergence of the Latin American vanguards of the 1930s, which became committed to the national identity of the new post-colonial National States. Despite the notion of cultural avant-garde manifesting itself as an internationalist phenomenon, the Latin American vanguards developed a peculiar way of constructing representations of national identities that relativized their colonial origins, through rhetorical and artistic elaborations capable of equalizing oppositions such as local/global, progress/tradition, metropolis/colony, nostalgia/plan[10]. These representations were supported by a notion of underdevelopment that motivated the avant-garde to take the lead in a process of cultural acceleration that was intended to overcome social backwardness and lead nations towards a promising future, equivalent to the colonizing metropolises, but independent of them.

In a second round, after Brasilia, this refusal took on anti-imperialist aspects, with the advent of the Cold War and anti-communist military dictatorial regimes in the region. It is at this moment that the ideological discourse shifts from the "national" to the "social" tone, in line with the cultural guidelines of the Brazilian Communist Party (PCB), to which Oscar Niemeyer and Vilanova Artigas were affiliated. The latter was the main responsible for establishing "semio-material practices of design and construction" that linked architectural design and political agendas of social action, establishing the foundations of brutalist architecture in São Paulo at the Faculty of Architecture and Urbanism of the University of São Paulo (FAU-USP)[11].

The Brazilian Pavilion in Osaka was built at this time, which coincides with the most violent period of the Brazilian dictatorship. It did not fail to offer a critical counterpoint and staged this brutalist refusal in the international arena, as a novelty in the form of backwardness.

Compared with the previous period, "Brutalism is recessive, negative, more than a casual phenomenon, […], it corresponds to contestation, to a broad reaction against distress and malaise, against the involuntary strangeness caused by modern architecture."[12] It responds to the basic contradiction between artistic authorship and anonymous serial production, the supposed destiny of Modern Architecture. In the Brazilian case, with less pop appeal than English Brutalism and more contextual than the late expressionist turn of Le Corbusier`s Brutalism, São Paulo Brutalism found in the negative expressiveness of apparent raw concrete - its rusticity and its unfinished aspect, distinct from the optimistic aspect of white concrete - a critical and dialectical potential of representation that contrasted with Brazilian Modern Architecture, without breaking with its principles. It became possible to be nationalist and critical of the State. Believing in developmentalism, but doubting progress; be new, but also out of time. The period coincides with the emergence of the *Theory of Dependency*, within ECLAC,[13] which opposed the model of *Underdevelopment* to highlight the structuring relationships of *Dependency* between unequal nations, politically and economically. Overcoming backwardness is no longer just a condition of acceleration but a political dispute over versions of a future divided into apparently irreconcilable directions in a bipolar world.[14]

Between 1980 and 1990, a third wave of reaffirmation of the avant-garde language, again linked to Modern Architecture, stood out as a historical particularity of Contemporary Brazilian Architecture in the international panorama. Seen in retrospect and considering the protagonism attributed to the work of Paulo Mendes da Rocha by this generation, the Brazilian Pavilion in Osaka represents a conciliation between the avant-garde postures. It combines the analogy with the landscape and the exuberance of the curves animated by the variations of the support points, present in Niemeyer's works, with the technical morality, the brutalist hardness, and the covered open space, typical of Vilanova Artigas. This conciliatory vision was strengthened as the historical distancing of Modern Architecture became a reality and it came to be understood as a national tradition.

The main initiatives to recover this modern tradition as a contemporary architectural language began with the coordinated effort of a group of architects who studied at FAU USP between 1986 and 1996.

The pioneering and most successful architectural achievement of this endeavor was another national pavilion at another EXPO. The Brazilian Pavilion at EXPO Sevilha in 1992, designed by the then young architects Angelo Bucci, Álvaro Puntoni and José Oswaldo Vilela, was the result of an architecture competition and impacted critics precisely for its "lack of originality". It was a suspended reinforced concrete box, in clear reference to the school building where the architects had studied. The proposal also made discreet references to the strategies of the Osaka Pavilion, by Paulo Mendes da Rocha, who was a member of the jury that chose the project. The apparent "lack of originality" actually revealed the novelty of recovering the past. The project, however, was never built, but it gave the name that was attributed to the group: Seville Generation. This initiative reverberated with the historiographical and theoretical production of the period and was disseminated through of a broad cultural apparatus that includes public universities, student magazines (Revista Caramelo), the specialized press (Projeto Design Magazine [1977-], aU Magazine [1985-], Vitruvius Website [2000-]), professional associations (Instituto dos Arquitetos do Brasil - IAB), and other cultural events, especially in São Paulo.

The most cohesive milestone of this effort was presented in the exhibition *Coletivo: Arquitetura Paulista Contemporânea (Collective: São Paulo Contemporary Architecture),*[15] in 2006, and the most significant result from an international point of view was the Pritzker Prize for the architect Paulo Mendes da Rocha, the most prestigious global award for personalities in architecture.[16] As the main teacher and declared mentor of this generation, his rhetorical refusal ultimately resulted in an authorial recognition that has now been exploited as a common language and cultural heritage.

This perspective continued to play a dominant role through this cultural apparatus and still prevails today, with most of these professionals continuing to work with architectural design and most of them becoming teachers at the school where they graduated, FAU USP, among others.

From the perspective of this group, the fundamental debate was how to overcome "the crisis years" of Brazilian architecture and get back to the model signed by Vilanova Artigas in the 1960s, based on affirmative adherence to the architect's humanist 'design', understood here as an instrument of his social action."[17] Such a crisis resulted from criticisms denouncing Modern Architecture's contradictions, which challenged the theoretical core of this body of thought. If architectural design inevitably meant a political contradiction, giving up 'design' meant, in practice, admitting these contradictions.

However, the consequences of this debate go beyond this ideological justification around an ethical and heroic dilemma. Nor does it explain the rooting of this historical perspective and the dominant diffusion of its results, both academically and commercially.

Despite not fitting into the conventional forms of classical postmodern nostalgia (based on the link between middle-class mass consumption and the rescue of pre-modern repertoire), the hypothesis is that this return to tradition is a particular form of nostalgia, which corresponds to the unfolding of modernity itself and its contradictions, but in its particular version of the peripheral contexts, that is, of the "Backward" Nations, those "Condemned to be Modern".[18]

However, nostalgia is not being used as a mere pejorative slogan, usually seen as a deviant memory. Rather, we use its reflective and critical potential as an essential sensibility of modernity. While notions of tradition and heritage are positive forms of memory, nostalgia has often been seen as a negative consequence of longing, "an ethical and aesthetic failure."[19] In fact, nostalgia runs through most of the paradoxical manifestations of time in modernity, as an inescapable feeling, but constantly denied or misunderstood, above all because it "counteracts, even undermines linear notions of progress."[20] The critical revision through nostalgia has been a product of the critical revision of the notions of modernity and has thus become a useful instrument for historical analysis. While the notions of heritage and tradition emphasize continuities, cohesion, and approximations between past and present, nostalgia emphasizes the cut, the separation, the inevitable differences, and the anguish due to the impossibility of returning. These notions guide historical reading through more or less effective ways to answer certain questions.

It is the reflexive potential of nostalgia that allows us to identify changes in the meaning of the idea of Backwardness (and even modernism) over time since it does not always refer to the same reference of progress or future but to a sensibility about the passage (or not) of time at each moment.

In the case of contemporary Brazilian architecture, the continuity of modern language today has been interpreted as a relationship of heritage and reverence but systematically denied a nostalgic relationship or formalist reproduction: "Without illusions or desire to recover a glorious past, its reinterpretation serves, just an initial base to explore new contexts and experiment with new combinations and technologies"[21]. This is how contemporary criticism has recognized this recurrence, also reproducing a certain refusal to consider or even respond to foreign interpretations.[22]

However, the way this link is presented leaves no doubt about the formal nature of these referencès, as well as the way the authors denied the "desire to recover a glorious past" suggests precisely the longing for the impossibility of this return, as the authors state: "(it is) perceptible in the current production the affiliation to postures and lineages that had their roots in paradigmatic buildings launched by the first generation of Brazilian modernists"[23]

If the forms and images of the past are not perceived as nostalgic triggers, but as emblems to be updated, the unrecoverable "glory" is a source of longing expressed in the authors' argument: "Once the illusions of the social transformation of the country through architecture were discarded, the modern is taken as a language and no longer as an ideology"[24]

Even if it were simple to discard these "illusions" definitively, their absence is a feeling that links the present to the past, in an irreversible way in this case. Even so, not even the full conviction in a complete political emptying of architecture would necessarily indicate ideological immunity, but precisely the opposite.

Huyssen established a connection between nostalgia and authenticity, highlighting it as a fundamental theme of modernity:

> "Aura and authenticity are analogous to each other. Both have to be framed historically rather than ontologically. Modernist decisionism declared both of them dead and gone, but both have proven to be quite resistant to all manner of ideology critique. The desire for the auratic and the

authentic has always reflected the fear of inauthenticity, the lack of existential meaning, and the absence of individual originality. The more we learn to understand all images, words, and sounds as always already mediated, the more, it seems, we desire the authentic and the immediate."[25]

As a result of these mediations promoted by modernity itself, authenticity has been a relevant theme of Modern Architecture since its origins. In Brazil, this principle guided the exceptionality of the national avant-garde, interested in promoting official architecture (see Brasilia), and also the search for "good architecture" to be offered by architects' social action. Whether in favor of a "true" national tradition or through abstract and superior moral principles such as "good form", the principle of authenticity has not been abandoned in contemporary architecture. On the contrary, it intensified, despite playing new roles. This intensification would not make sense without a feeling of imminent risk of Modern Architecture`s disqualification and, consequently, of threat to the social position of architects as a prestigious and engaged professional category. In this case, the nostalgic mechanism operates not only through a consummate cut but precisely in the production of a sensation of rupture with the idealized past, that is, the constant production of a sensation of risk of distortion, of abandonment, even if it cannot be historically verified.

Although socially limited to the intellectual classes, the influence of these middle-class groups that promoted an engaged national culture during and after the Brazilian dictatorship, including architects, was not limited.[26] Despite many factors like the dispute between postmodernism and modernism; Brazil's international commercial opening in the 1990s, which diversified the construction market with other repertoires; the eloquent heterodox experimentations (in which Lina Bo Bardi can be included); a continuous social production of non-professional or "informal" constructions in Brazilian cities; and aging itself, the ideals of Modern Brazilian Architecture continued to be dominant in the main schools of architecture and always occupied a prestigious place in the national culture. But all these factors contributed to the production of this resistance sensitivity. A kind of conversion of the avant-garde into rearguard.

Furthermore, the consequences of the military dictatorship and the refusal of a historical revision are not disconnected from the most palpable aspect of this feeling of imminent rupture, that is, the death of the masters. Vilanova Artigas died in 1986, a few years after returning to teach at the college he indeed helped to build. Lina Bo Bardi died in 1992, shortly after the recognition of her work, which was suppressed throughout the military period and only Oscar Niemeyer survived the turn of the millennium. In this sense, even if it were possible to discard those "illusions of the role of social transformation", several of these referential characters suffered real consequences for their engagement, whether they were effective or not.

That would be enough to motivate a contemporary apologetic trend, but there was an even more disturbing anguish to plague the new generations. The Brazilian dictatorship shared the "symbolic universe of technobureaucracy" to "...produce technocratic, administrative and 'scientific' discourses and ideologies capable of disguising and covering up, on persuasive bases, the current structure of power [...]."[27] Guided by a developmental and nationalist ideology, the military governments established a contradictory, but not irreconcilable, relationship with a symbolic universe similar to that of Modern Architecture, especially in its Brutalist version. That is, a reading of the historical continuity of Brazilian Modern Architecture involved the inconvenience of admitting occasional episodes of collaborationist complicity or symbolic convergences of positivist convictions, with profound undesirable consequences. What was at stake in the period of Brazilian re-democratization was the balance of the country's conservative modernization, whose promise since the 1930s was to overcome national backwardness and lead the country towards its tropical "manifest destiny", but which had taken to "urban chaos" and the "lost decade," as the 1980s became known.

Without a large enough middle class for an exit through (pop) language and without giving up the "incomplete project" of modernity, despite the warnings,[28] Brazil did not have the conditions to reproduce its own dilemma between Grays against Whites. The most appropriate theoretical output was a particular version of critical regionalism, with the signs switched, in which the regionalist expression would be Modern Brazilian Architecture itself. In the version disseminated by Frampton[29], the most effective way to purify the expressions of order and rationality attributed by him to Modern Architecture would be to combine them with local, vernacular, and primitive cultural elements, against the global standardization of the Hyper International Style. In other words, a re-edition of colonial myths in a conciliatory language between "neutral" and "international" modernism and "exotic" and "local" peculiarities.

Not only was it reversed, but the bet was doubled. From the perspective of this new generation, Brazilian Modern Architecture, in general, became an example of Critical Regionalism *avant la lettre* reinforced by historiographic arguments that already considered nationalist deviations as the great virtue of Brazilian architecture. Without pointing out examples, Cohen suggested the term Critical Internationalism and its description fits with the scenario described here:

"Same time fetishistic, when the spectrum of its references is reduced to the 'pilotis' or to Le Corbusier's "free plan", but generally sincere, this backward, retrospective look favors an architecture inscribed in the rhythms and materials of early 20th century, while avoiding postmodern nostalgia for medieval or classical cities."[30]

Symptomatically, the question of nostalgia appears as a consideration. Nothing more notable. But if regionalism was a response to the undesired manifestations of global modernization, the critical pole demanded a non-condescending review of local aspects, that is, with the modern legacy itself in this case.

Among other aspects that will not be possible to develop here, the central theme of the city stands out as the central point of reference between modernism and modernization, as pointed out by Gorelik.[31]

This was one of the main points of review by the new generation. The city functions both as an engine and as a projected image of Latin American development. At the end of the "expansive phase", Brazilian urban development revealed itself as the opposite of the projected image of Brasília, in other words, imperfect hybrids of Modern purification.[32] Despite this and different from the European nostalgia, the image of urban authenticity remained linked to the ideal of modern urbanism, in the imagination of contemporary architecture. The real Brazilian cities, that is, the amalgamation between old colonial fragments; peripheries and so-called informal settlements; the "capitalist-dominated" suburbs; or even the vast hinterland of small towns, plantations, and forests; ceased to represent the Backwardness to be overcome, but the immutable landscape against which architecture no longer denies but establishes an emphatic didactic contrast.

In this sense, what was overcome was the expectation of social action through a general transformation of the territory, that is, a critical update against the totalizing dimension of the Plan without giving up its allegorical revolutionary role, translated into what is usually called "spatial dispositions,"[33] in other words, fragments of atomized *Tabula Rasa* or monumental avant-garde's reliquaries. This recurrent approach emphasizes the autonomy of the architectural object, spacing from its contexts, but in a didactic and corrective dialogue with it. These open enclaves point to an idealized urban order with free ground floors and compositions of pure and technically refined forms. The more distant the difference between the ideal and the real city, the more effective the pedagogical contrast.

Here, we can recognize an aesthetic expression of the idea of Backwardness and also a theoretical meaning. These neomodern buildings, not only the most sophisticated examples of the pioneering group but now a vast production that has spread, are inscribed as novelties discreetly displaced from the immediate present, a wise combination of the new with the familiar that resists the passage of the time, in the direction of a suspension of temporality that points to the classic. This classicist tendency was perceived in one of the critical texts in the catalog of the Coletivo exhibition, in which the Portuguese critic Ana Vaz Milheiro insinuates that: "It all starts from the FAU building, just as the roots of architecture itself lie in the Parthenon."[34] Here we can see the shift from an authenticity based on the supremacy of nature (through technique) over culture, typical in the discourse of modern architecture, to an authenticity based on the authority of tradition, in which white and male values tend to prevail.

The dispersion of this trend coincides with the significant increase in architecture schools between 1994 and 2002[35] beyond the southeastern region of Brazil, where the main traditional schools were concentrated and where the most consolidated versions of the architectural history were forged.

Bortoluci highlighted the risks of the brutalist critical mechanisms of the 1960s being "routinized and lost much of its intended critical capacity."[36] This consequence does not seem to be different for this new generation, after three decades from the Sevilha Pavillion in 1992, the first milestone of this generation.[37]

The strategy of symbolic refusal against the linguistic turn that came to represent the novelty in architecture reflects an intention to oppose architecture to modern mass media and the spectacle. This refusal, however, made it difficult to recognize architecture as one among other media.[38] The result was precisely an effective dissemination of the Modern Architecture repertoire as effective images of consumption and prestige. The intention to take a step outside the technical logic of late capitalism favored its internalization, after all, auratic valuation and productive optimization were old principles of capitalist production and are in line with the neoliberal ideals of austerity and consumer segmentation. As a new canon in the form of standardization, the dispersion of this architectural pattern, at the same time exceptional and mass consumed, according to its references from the national avant-garde, preserved the aura of political engagement and spread a humanist content that gradually acquired a conservative tone over time, in comparison with new agendas.

Furthermore, the political transformations resulting from re-democratization in the 1990s coincided with the period of international neoliberal hegemony. It is still necessary to verify more deeply the role of the new left-wing hegemony represented by the Workers' Party (PT) in the New Brazilian Republic. It represented the emergence of a new political framework that was, in its origin, quite resistant to the dirigism of the intellectual avant-gardes.[39] In this sense, it is possible to assume that nostalgia does not only refer to a threatened architectural tradition but represents a feeling of nostalgia in reaction to the decline of the political leadership of the Brazilian Communist Party (PCB) which, among other leftist

groups, were persecuted by the dictatorship, promoted a memory of resistance in its favor, but did not prevail in the new arrangements of democracy. If the ethical parameters of the brutalist avant-garde were based on the cultural and political action of the PCB, today they run the risk of being limited to a class perspective, as moral and normative dogmas, instead of reflecting political agendas linked to parties or social movements.

Finally, nostalgia for backwardness refers to the decline of the "projected (if eternally postponed) control of the future, [...], constitutes both the modernity and the historicity of the avant-gardes."[40] Both the intense Asian industrialization process, the climatic emergency, and more recently the hypothesis of a Brazilianization of the world[41], are examples that contribute to a new feeling of vertigo. If overcoming backwardness compelled the avant-gardes to reach the future represented by the metropolises, how can our perception of time change as we realize that the metropolises are beginning to show the same symptoms of backwardness? We stop perceiving ourselves as backward to become the image of a dead-end future, which awakens fantasies of the time when we were backward. After all, the discomfort of being late is more comfortable than the despair of having missed the time.

Nostalgia can be seen as a useful tool for examining emotions connected to the past in architecture. Its purpose is to bridge the gap between new and old spatial and construction practices, not only to prevent a future programmed to collapse but also to empower the present to repair the past and bring about meaningful transformations for the future, rather than mere repetitions.

Notes

1. Schwarz, *As Ideias Fora Do Lugar*. The cultural impact of this mismatch between time, space, and ideas was presented in a more significant way in this well-known critical essay that relates liberal thought, slavery, and the literature of Machado de Assis in the Brazilian nineteenth century.

2. Vianna, "Ventajas de Lo Moderno, Ventajas Del Atraso." In addition to the Brazilian uniqueness, backwardness plays an important role in left-wing political theory, especially in the unequal and combined analysis between nations. For a brief summary of this tradition, see also: Vianna, "O moderno, o atraso e a esquerda."

3. Gorelik, *Das Vanguardas à Brasília*.

4. Martin, *O Fantasma Da Utopia*, 81. The author returns to the themes of postmodernity in architecture and points to a change in the representation and perception of historical time in the end-of-history period, from a continuous "cinematographic" line to a flexible and editable VCR version.

5. Arantes, *Urbanismo em fim de linha*; Arantes, *O lugar da arquitetura depois dos modernos*; Frajndlich and Bragaia, "Arquitetura Brasileira e Redemocratização." In the case of Brazil, the critical debate of the period came to point out the contradictions of modern architecture but also recognized in postmodernity the escalation of these contradictions.

6. Motta, "Arquitetura Brasileira Para a EXPO' 70."

7. "Pabellón Argentino," 35. The press commentary recognized that Argentina's industrial advances could not be understood as novelties compared to the innovations presented at EXPO. Designed by the architect Roberto Quiroz (1915-s.f.), the Argentine pavilion was planned as a restaurant that would showcase its gastronomic culture and the qualities of the country's agricultural meat production.

8. Sperling, "Arquitetura Como Discurso." Despite being an essay, less rigorous and with a flattering tone, the text was published in an academic journal and received an honorable mention in an award promoted by the São Paulo Department of the Institute of Architects of Brazil (IABsp) in 2002 and demonstrates the intentions to value historical narratives that highlighted the relevance of the Pavilion recently, inside and outside the academic cycles. A more recent example was the exhibition *Architecture of Exception* (Arquitetura de Exceção), held in 2018, in which the Pavilion is the central theme. Available at: https://escoladacidade.edu.br/galeria-da-cidade/arquitetura-de-excecao-o-pavilhao-do -brazil-at-expo70-osaka/

9. Pisani, Paulo Mendes Da Rocha: Obra Completa. In 2020, the architect's entire collection was acquired by the institution *Casa de Arquitectura*, located in Portugal.

10. Gorelik, *Das Vanguardas à Brasília*.

11. Bortoluci, "Brutalism and the People."

12. Gimenez, "O Recuo Brutalista." From the original: "O Brutalismo é recessivo, negativo, mais do que um fenômeno casual, [...], corresponde à contestação, a uma reação ampla contra a aflição e o mal-estar, contra a involuntária estranheza causada pela arquitetura moderna."

13. The United Nations Economic Commission for Latin America and the Caribbean, (ECLAC, ou CEPAL in Portuguese) is an organization linked to the United Nations (UN), created in 1948 and based in Santiago, which brought together Latin American intellectuals with the objective of regional economic cooperation. Among the main intellectuals active at that time were the Argentine economist Raúl Prebisch (1901-1986) and the Brazilian economist Celso Furtado (1920-2004).

14. Iber, *Neither Peace nor Freedom*.

15. The exhibition selected 6 offices and 16 professionals. Some of the members did not remain in the same offices. Among the most representative names are: Vinicius Andrade and Marcelo Morettin, from the Andrade e Morettin office, responsible for the building of the Moreira Salles Institute in São Paulo (2017); Fernando de Mello Franco, Marta Moreira and Milton Braga, from the MMBB office, who collaborated directly with Paulo Mendes da Rocha on the SESC 24 de Maio building (designed in 2000 and inaugurated in 2017); Alvaro Puntoni and Angelo Bucci, authors of the Brazilian Pavilion for the 1992 Seville Expo, who informally named the group "Seville Generation"; and Cristiane Muniz, Fábio Valentim, Fernanda Barbara and Fernando Viegas, from the UNA office, responsible for the intervention in the Central Post Office Building in São Paulo (1997-2008). Guilherme Wisnik, one of the curators of the exhibition, also graduated from the same school and in the same period and became an intellectual reference of the generation.

16. Paulo Mendes da Rocha also received the Golden Lion at the 15th Venice Architecture Biennale and the Imperial Prize of Japan, both in 2016, and the Mies van der Rohe Prize for Latin American Architecture, in 2000, for the restoration of the *Pinacoteca do Estado de São Paulo* (1996).

17. Wisnik, "Spatial Dispositions," 242.

18. In Brazil, the expression is attributed to the Trotskyist art critic Mário Pedrosa.

19. Boym, *The future of nostalgia*, XIV.

20. Huyssen, "Nostalgia for Ruins," 7.

21. Cavalcanti and Lago, Ainda moderno?

22. Even so, this version has been accepted internationally and one of the authors, the diplomat André Corrêa do Lago, became the first Brazilian member on the Pritzker Prize jury, after curating the exhibition *Modern as Tradition* in 2014 at the Brazilian Pavilion of the Venice Architecture Biennale.

23. Cavalcanti and Lago, *Ainda moderno?* Translated from the original: "É perceptível na produção atual a filiação a posturas e linhagens que tiveram suas matrizes e prédios paradigmáticos lançados pela primeira geração de modernistas brasileiros."

24. Cavalcanti and Lago. Translated from the original: "Uma vez descartadas as ilusões do papel de transformação social do país através da arquitetura, o moderno é tomado como linguagem e não mais como ideologia."

25. Huyssen, "Nostalgia for Ruins," 11–12.

26. Napolitano, *Coração Civil*, 335.

27. Miceli, *A Noite Da Madrinha*, 62. Translated from original: "...produzir os discursos e ideologias tecnocráticas, administrativas e 'científicas' capazes de dissimular e recobrir, em bases persuasivas, a estrutura vigente de poder…"

28. Arantes, *O lugar da arquitetura depois dos modernos*.

29. Frampton, "Towards a Critical Regionalism."

30. Cohen, *O Futuro Da Arquitetura Desde 1889*, 434. Transated from the original: "Por vezes fetichista, quando o espectro de suas referências fica reduzido aos pilotis ou à "planta livre" de Le Corbusier, mas de modo geral sincero, esse olhar voltado para trás, retrospectivo, privilegia uma arquitetura inscrita nos ritmos e nos materiais de começos do século XX, ao mesmo tempo que evita a nostalgia pós-moderna pelas cidades medievais ou clássicas."

31. Gorelik, "O moderno em debate: cidade, modernidade, modernização."

32. Latour, *Jamais fomos modernos*.

33. The term "spatial dispositions" appears repeatedly as an implicit or explicit reference. The term is a kind of substitute for "building" and demonstrates the principle of reducing architectural form to its elementary components, with minimal authorial and symbolic traits. The very polysemic and apparently imprecise aspect of the term does not directly reveal this meaning shared by the members of the group. Its origin is attributed to the architect Paulo Mendes da Rocha as a way of describing his projects. This is how it is presented by Angelo Bucci in his book *São Paulo, Razões de Arquitetura* (São Paulo: Romano Guerra, 2010) whose title refers to the canonical text "Razões da Nova Arquitetura" (1930) by Lúcio Costa, another founding personality of

Brazilian Modern Architecture. The term is still used as the title of the curatorial text by Guilherme Wisnik in the exhibition "Coletivo."

34. Milheiro, "'Coletivo': The invention of the classical," 239.
35. Salvarori, "Arquitetura No Brasil: Ensino e Profissão," 57.
36. Bortoluci, "Brutalism and the People," 316.
37. Not by coincidence, the most emblematic project that names and marks the beginning of this generation is also an Expo pavilion. It repeats the same condition of symbolic exceptionality characteristic of the occasion, but unlike that one, it was never built and is part of the contemporary imagination only as an image and representation of architecture.
38. Martin, *O Fantasma Da Utopia*, 100.
39. Barros, *PT: Uma História*, 127; Costa, "Popular Reflractions"; Chaui, *Seminarios. O Nacional e o Popular na cultura brasileira*, 84–85.
40. Martin, *O Fantasma Da Utopia*, 83.
41. Arantes, "A Fratura Brasileira Do Mundo."

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Biography
Frederico V. Costa is an architect and Ph.D. candidate at UNICAMP since 2021. FAPESP PhD scholarship holder. He holds a master's degree from FAU USP and conducts research in the areas of architecture and urbanism theory, history, and criticism. From 2017 to 2022, he taught architecture and urbanism at UNIFEOB in the interior of São Paulo. Additionally, he has held various roles in cultural institutions, including being the Manager of the MCB Design Award at the Museu da Casa Brasileira from 2022 to 2023. He has also worked as a production assistant and architecture curatorial assistant in institutions such as Instituto Tomie Ohtake, Casa do Povo, and the Brazilian Pavilion at the 14th Venice Architecture Biennale. He is a member of the collective Arquitetura Bicha (@arquiteturabicha) since its formation in 2020, and lives in São Paulo.

(Re)Defining Utopia
The Changing Concept of an Ideal World

Čulek, Jana [1,2]
1. TU Delft, Faculty of Architecture and the Built Environment, Chair of Methods of Analysis and Imagination, Delft, Netherlands
2. Urban Studies, DeltaLab Center for Urban Transition, Architecture and Urbanism, University of Rijeka, Croatia

Abstract

Utopia, seen not only as a creative and imaginative form, but as a critical and speculative method of devising worlds, spaces, and societal structures different than our own has existed long before receiving its name based on Thomas More's 1516 book *Utopia*. Originating in the literary field, utopia has since been used in various creative disciplines, including architecture. Presented as a textual and/or visual narrative, often set in an unspecified future and a remote location, utopias describe worlds in which many or all ails of its author's historical context have been solved through a thorough reconstitution of the built environment and its inhabitants.

And while what constitutes a utopian work has changed over centuries, it has for the better part of history remained a positively charged notion, signaling new hope and new ideas for the future. However, from an architectural perspective, the notion of utopia has taken on more negative and even pejorative connotations, often signifying a project or idea which is so far off from any concept of reality that it can automatically be dismissed as trivial or inconsequential.

Observing utopia from an architecture standpoint, focusing mostly on its development within the last century, this paper will address some of the changes which have occurred in the meaning, understanding, and connotation of utopia within the architectural field. Correlating these changes with the rich and multilayered understanding of utopia as a literary concept, deepened with its numerous sub-forms and genres (i.e. dystopias, anti-utopias, critical utopias, etc.), the paper will argue that utopia as a form, although often viewed as straightforward in its meaning, actually allows for and has demonstrated a capacity for change and variety, adapting itself within numerous historical periods and creative fields in order to critically and speculatively respond to everchanging political, societal, cultural, and economic challenges.

Key words: utopia, ideal city, utopian literature, utopian architecture, critical method.

1. Utopian Terminology

It is impossible to observe utopia as an architectural word or concept and its changing meanings and connotations, without discussing the concept's literary origins, as well as its numerous related terms. But before focusing on the etymology of utopia, it is perhaps curious to note that, although utopia as a genre owes its name to Thomas More's 1516 book *Utopia*[1], More's initial intent was to name the book (and its imaginary island) *Nusquama*, based on the Latin *nusquam* meaning "nowhere", "in no place", "on no occasion"[2], only to decide against it for the reason of not completely wanting to deny "the possibility of the existence of such [a] place"[3]. Choosing, in turn, to name his imaginary island as Utopia, stemming from the ancient Greek words *topos*, meaning "place", and *ouk*, meaning "not", he automatically defined it in spatial terms, as "a place which is a non-place, simultaneously constituted by a movement of affirmation and denial"[4]. While originating as a literary and narrative form, one of utopia's most relevant hallmarks is that it has always been innately spatial. Defining utopia as a discourse rather than a concept, Louis Marin argues that "the 'content' of utopia is the organization of space as text"[5] and that "each utopia is the 'figurative' product of possible architectural production"[6].

But as Fátima Vieira notes in her text "The Concept of Utopia"[7], More added another name for his imaginary island located at the end of the book, in a six-verse poem structured into the narrative in which the island is referred to as *Eutopia* – meaning *good place* – creating thus a "perennial duality of meaning of utopia as the place that is simultaneously a non-place (utopia) and a good place (eutopia)"[8]. The dual terminology can also be seen as describing two different aspects of utopia where "utopia in the sense of *eu topos* [good place] refers to an ideal society and its realization", and "utopia in the sense of *ou topos* [no place] emphasizes a mode of narrative rather than a political goal"[9], relating it directly to its original narrative format which constitutes a "traveler's account of a visit to an imaginary country where the journey is either to a far-of land or to the distant future"[10]. In other words, aside from depicting an imagined space which is different from our own, this space is also visualized as better than our own.
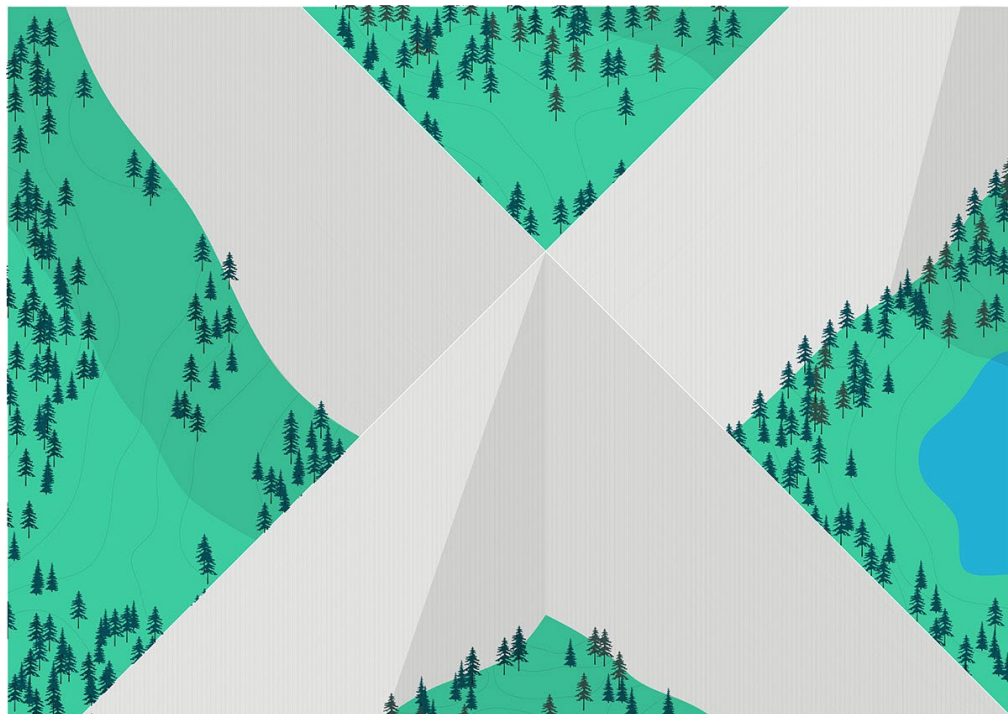
Fig.1

Aside from utopia's original form, several other sub-forms or sub-genres have emerged over the centuries – playing with the *topos* etymology – in which certain aspects, goals, or approaches have been modified. Perhaps the most known term is that of *dystopia* – utopia's counterpart the goal of which is not to create an imaginary place as an expression of human desire, but rather one as a response to fear[11]. Devised by the British philosopher and political economist John Stuart Mill, the term combines *topos* with the ancient Greek *dus* meaning "bad, abnormal, diseased"[12]. Unlike utopia, "dystopia rejects the idea that man can reach perfection"[13], focusing rather on the goal of convincing their readers and viewers that "social improvement – rather than individual improvement – is the only way to ensure social and political happiness" and that "the depicted future" which dystopias describe are "not a reality but only a possibility that they [readers/viewers] have to learn to avoid"[14].

Other utopian sub-forms include *satirical utopias* in which the main drive is "distrust"[15]; *anti-utopias* in which the drive is "total disbelief"[16]; *critical dystopias* which are described by Vieira as dystopian narratives in which the authors have "tried to make it clear to their readers that there is still a chance

for humanity to escape, normally offering a glimmer of hope at the very end of the narrative"[17]; *critical utopias* which depict "a better future, but by no means a perfect future"[18]; as well as more contemporary related forms such as *heterotopia* or *hyperutopia*. Heterotopia, a term coined by French theorist Michel Foucault, refers to "unreal spaces" and "sites with no real place" which have a "general relation of direct or inverted analogy with the real space of society and "present society itself in a perfected form, or else society turned upside down"[19]. Hyperutopia, on the other hand, is a more recent neologism which "forces the reader to deal with the problems of multilinear reading, of the abolition of the idea of center and margins, as well as of all forms of hierarchies"[20].

While most, if not all of the utopian sub-categories originally stem from the literary field, a lot of them can be identified in architectural works as well. Aside from utopia proper, which has historically been the most predominant form within the architectural field, the twentieth century also brings forth the anti-utopia or the critical utopia in which – through more narrative based projects such as those of Superstudio, Ettore Sottsass, or Constant Nieuwenhuys, to name but a few – a critique is posed towards society but without the need of escaping to an idealized utopian narrative in which all issues are solved. Through acknowledging the flaws and shortcomings of the utopian method and exploiting them, anti-utopias have proposed critical reflections on society where the goal was not one of betterment or fear, but rather of re-examination and questioning of the status quo through imaginative means.

2. Defining Utopia in Architecture

While the etymology of utopia already demonstrates the breadth of the term, approaching a further specification of what utopia actually is, with the aim of providing a single and all-encompassing definition is a task of nearly utopian proportions. It is important to establish that the task of defining utopia concept is a much revisited one, and that it is often field-specific, with definitions encompassing only those aspects of utopia which are relevant or graspable from the point of view of the researcher. It could be argued however, that this unreachable universal definition of utopia is also impossible because there is "no universal utopia, not just because needs are differently perceived by different observers but because needs actually do vary between societies"[21]. Acknowledging the impossibility of providing a universal definition of utopia, Vieira instead opts for providing several different approaches which are most commonly defined in regard to:

"(1) The concept of the imagined society […]; (2) the literary form into which the utopian imagination has been crystalized […]; (3) the function of utopia […]; [and] (4) the desire for a better life, caused by a feeling of discontent towards the society one lives in […]."[22]

But, as this paper proposes, utopia can also be defined and explored in regard to a specific creative field or discipline within which it is produced – which is in this case the field of architecture and urban planning. French architectural and urban theorist and historian Françoise Choay in her work *The Rule and the Model: On the Theory of Architecture and Urbanism* (1997) examines links between architectural treatise and the literary utopia. In it, Choay introduces the concept of *instaurational* texts – an overarching term which brings together architectural treaties, theories of urbanism and utopias. While acknowledging that it is debatable whether utopias as a literary genre should be included, she states that the fictional and imaginary basis of utopia does not "deprive it of any efficacy"[23]. She continues to explain that utopias "propose by means of critical reflection on society the imaginary elaboration of a counter-society" and that they are "organically connected with the urban theories [they] preceded, having stamped upon their form its indelible imprint"[24]. In other words, Choay provides a strong corelation between a specific set of architectural and urban texts with the utopian literary form stating that both types of text have "a critical approach to a present reality" and are busy with "the modelling in space of a future reality"[25]. She notes, however, that utopia should not be considered "with respect to its content, but rather to its form, shifting our attention from recent history to the *longue durée*"[26]. Choay defines for the reader both the traits of utopia, extrapolated directly from More's work stating that:

"(1) A utopia is a book signed by its author; (2) a subject expresses himself in the first person singular - the author himself, and/or his spokesman, an eyewitness to the utopia; (3) the text is presented in the form of a narrative which contains a description in the present indicative of a model society; (4) the model society is opposed to a historically real society, and the criticism of the latter is indissociably linked to the description of the former; (5) the model society is supported by a model space which is an integral, necessary part of it; (6) the model society is located outside of our system of spatio-temporal coordinates: it is elsewhere; (7) the model society is not subject to the constraints of time and change."[27]

And while Choay's definition of utopia is deduced through the literary field, I argue that many of her identified points can also be used in order to define the concept of utopian architecture, albeit with some modifications. Nathaniel Coleman, on the other hand, focusing less on utopian architectural projects and more on a utopian strive found in architectural projects of different scales or functions, relates utopia to the intrinsic drive of architecture rather than to its manifestation. He states that both utopia and architecture are "ever the result of a belief that what could be, or ought to be is superior to what is"[28], also noting that "as a literary form, fiction presents plausible unreality" and "architectural designs, like fictions, are the making of an imaginary realm." But, as he explains "architecture is

profoundest when an architect's invention advances a commentary on the social activities it will house, as they are lived and as they might be lived" which positions architecture "between conservation of what is and proposition of improved future conditions"[29] – which is very similar to the position of utopia, which as he explains also "envision improved conditions intended to replace existing ones, [with] their concern [being] as much with the past and present as with the future"[30]. He proposes to view architectural projects not as being utopian per se, but rather as having "utopian potential" or a "utopian dimension"[31], offering a definition of what a project must in order to be considered utopian. Namely, it should consist of at least some if not all of the following elements:

"…social and political content; a significant level of detail in the description of what is proposed; elaboration of a positive transformation of social and political life as key to what is proposed or constructed; and, not least – ethical and aesthetical – critique of the present informed by a critical historical perspective"[32].

2.1. When Architecture is Not Utopia

According to Louis Marin "utopia is space organized as text and discourse constructed as space[33]". This can be understood to mean that utopia is innately architectural. But is the reverse also true? Can we consider all architectural projects, regardless of their scale and social or political engagement as utopian? Architecture as a discipline has a projective nature. Projects are always set in the future and propose an alternative version – a change – to the present. However, even though they share a projective intention, I argue that not all architectural projects can be considered utopian. While the line which delineates non-utopian projects from the utopian ones is in no way fixed, clearly defined, or consistent throughout history, I propose that the two can still be differentiated.

A typical architectural project aims to propose a realizable solution to a defined problem (or a group of problems), while the utopian architectural project goes beyond the brief in order to provide a critical stance as well as a projective proposal. Both utopian and non-utopian architectural projects are created and depicted through the use of both drawings and texts. But while these two mediums vividly and intriguingly describe the imagined cities and societies of architectural utopias, they merely provide instructional or descriptive information in non-utopian architectural projects.

Another difference can also be noted in the location of the proposals. Given the scale and ambition of the utopian architectural project, and the degrees in which they divert from their contextual reality, they are often proposed as completely spatially (or temporally) detached from the built reality in order to accommodate the utopian vision. Unlike non-utopian architectural projects, the utopian ones tend to mostly remain in the form of so called "paper architecture" –which, similar to their utopian literary counterpart, are not intended or possible to be realized. Utopian projects are also often self-initiated, created as a result of the architect(s)'s own interests and research questions, and not as a result of conforming to marked led agendas. A utopian project is not a project of market necessity, and can as such also be seen as a project created from a position of privilege. And while utopian projects are often identified as either singular eccentric buildings whose out-of-the-ordinary form is explained nominally as utopian, or as large-scale spatial proposals, namely "ideal cities", whose designs are often based only on the principles of geometrical symmetry and the ideal distribution of spaces and use, neither of these two categories necessarily defines a utopian architecture.

When observing early utopian works such as that of More, Tommaso Campanella's *The City of the Sun* (1623), or Francis Bacon's *New Atlantis* (1627), it is important to delineate them from another term which re-appeared[34] in the architectural field in roughly the same time period, namely that of the *ideal city*. Best represented in the works of Leon Battista Alberti, Filarete's "Sforzinda" (c.1464), or "The Ideal City" paintings by Fra Carnevale (c.1480), ideal cities are often wrongly understood as architectural and urban manifestations of utopia. Ruth Eaton, in her book *Ideal Cities: Utopianism and the (Un)Built Environment* (2002), while acknowledging a correlation between the two terms, also provides a clear differentiation between the project of an *ideal* city as opposed to a *utopian* one. Eaton notes that proposals for ideal cities, according to their etymology, contain both a perfected physical model of an ideal space [*idea* (ancient Greek) – an intellectual conception or representation] and a corresponding notion that "the physical form of a city [*civitas* (lat.) – a body of citizens who constitute a state] can both reflect and condition the workings of a society and the behavior of citizens"[35]. But while ideal cities contain both a projective and physical model of an ideal space and a corresponding social and political ordering of its inhabitants, the modes of living they propose are not always critical or innovative in regard to their historical context. Eaton therefore defines two main types of ideal cities: *reactive* – "where the city is 'adjusted' to reflect an established social order"[36] and strengthen the political ideals of the system in power; and *proactive* – one which proposes a new type of social order and can therefore be considered utopian.

3. From Utopia to Heterotopia: A Recent History

While this paper will not delve into historical examples of utopian architectural works, it is important to address some of utopia's more recent architectural history, due to the often-observed incongruency in what utopia denotes within the contemporary architectural discourse.

Reflecting on the history of utopian architectural production of the twentieth century, the term most often signifies large-scale (pre)modernist projects such as Le Corbusier's *Ville Contemporaine* (1922), Frank Lloyd Wright's *Broadacre City* (1932), Ludwig Hilberseimer's *Metropolisarchitecture* (1920s) or even the earlier model for Ebenezer Howard's *Garden City* (1898). However, with the disillusionment in grand narratives which occurred as a response to the events of the Second World War, the form of utopia itself needed to change in order to remain relevant.
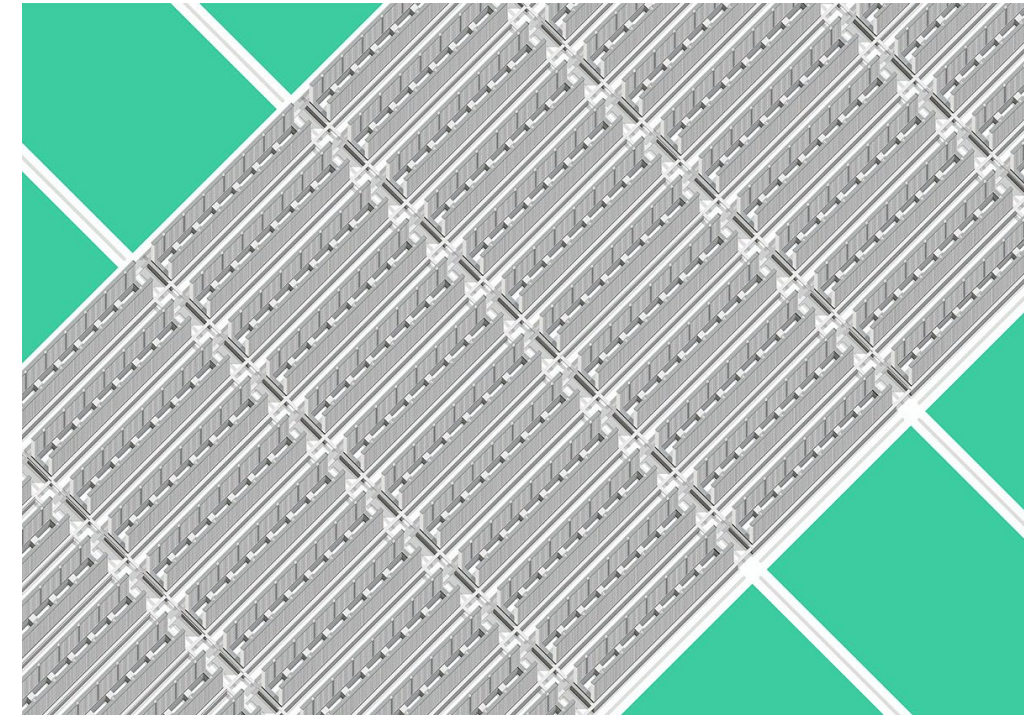
Fig.2
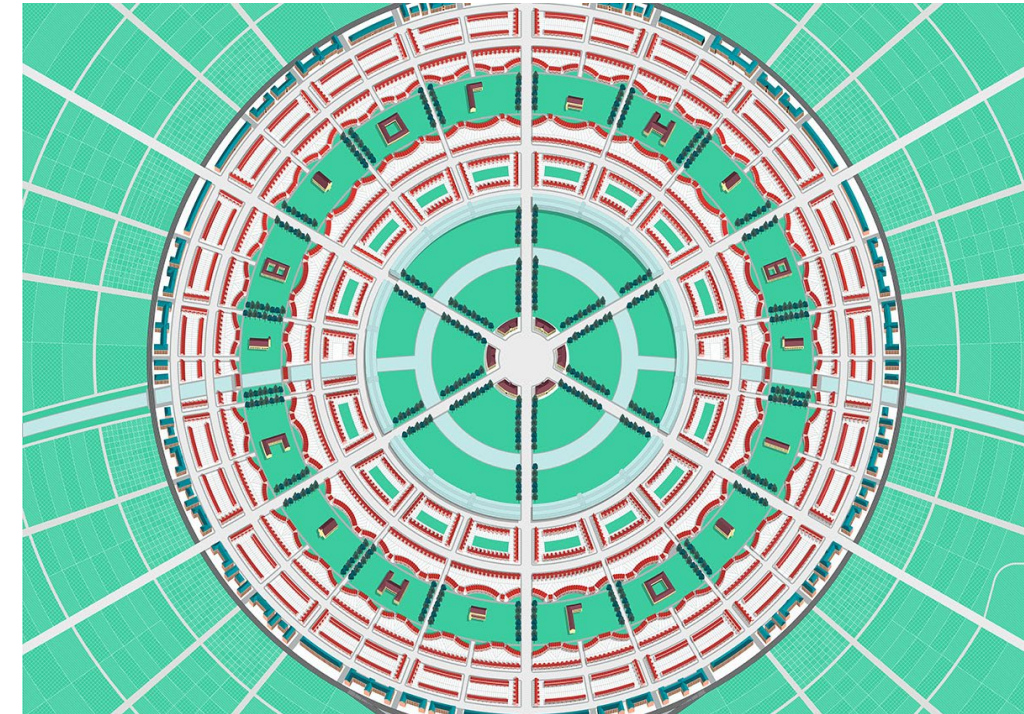
Fig.3

The societal change which began to occur within the second half of the twentieth century, becoming most prominent in the nineteen sixties led to what Foucault describes as the "epoch of simultaneity", and an "epoch of juxtaposition, the epoch of the near and far, of the side-by-side, of the dispersed"[37]. He continued to describe that the inhabited space became heterogenous and consisted of a "set of relations that delineates sites which are irreducible to one another and absolutely not superimposable on one another"[38]. As the title of his text "Of Other Spaces: Utopias and Heterotopias" suggests, he focuses on two specific groups of sites – utopias and heterotopias - which "have the curious property of being in relation with all the other sites, but in such a way as to suspect, neutralize, or invent the set

of relations that they happen to designate, mirror, or reflect"[39]. Foucault defines utopias as "fundamentally unreal spaces", as "sites with no real place", ones which have "a general relation of direct or inverted analogy with the real space of Society" and which "present society itself in a perfected form", or in the case of dystopias, "society turned upside down"[40].Heterotopias, on the other hand, are defined as "something like counter-sites", an "effectively enacted utopia in which the real sites, all other sites that can be found within the culture, are simultaneously represented, contested, and inverted"[41], noting also that they "are outside of all places, even though it may be possible to indicate their location in reality"[42].

Although Foucault differentiates utopia and heterotopia, seeing the former as unreal, and the latter as its possible real-life enactment, at that specific point in history, the notion of utopia itself begins to change – transforming itself from a more distant depiction of an ideal space and society, to a more critical yet grounded depiction of a possible alternative. And while by describing six principles of heterotopia, Foucault defines their various types and manifestations, what is more relevant in regard to heterotopia within this chapter, is the notion that all these heterotopias, diverse as they are, can seemingly all simultaneously exist within one larger space – that of the city.

Based on the notion of heterotopia, Charles Jencks identifies another concept parallel to it, namely that of the "heteropolis"[43] – a newly emerged form which could, I argue, perhaps be seen as a contemporary version of the *metropolis* – its early twentieth century counterpart, or perhaps its predecessor. He describes contemporary cities such as London and Los Angeles, as having grown from "a collection of villages" into a "multi-centred network"[44].

And while Jencks locates heterotopia as a formative element of the postmodern city – the heteropolis – which he sees as structured out of numerous social and spatial heterotopian forms, Harvey in *The Condition of Postmodernity* (1990) acknowledges its existence in literature as well. Harvey proposes that Foucault's concept of heterotopia is "a perfectly appropriate image to capture what [postmodernist] fiction is trying to achieve". He also notes that what Foucault means with the notion of heterotopia is 'the coexistence in 'an impossible space' of a 'large number of fragmentary possible worlds', or more simply, incommensurable spaces that are juxtaposed or superimposed upon each other"[45]. Given that this plural and heterogenous condition is prevalent on both the social and spatial level in this historical period, and that it permeates both architecture and literature, it is only expected that the utopian projects of the time – both architectural and literary – are structured out of numerous, often incongruous worlds, cities, and places. This is evident in projects such as Superstudio's *12 Ideal Cities* (1972), OMA's *Exodus: or the Voluntary Prisoners of Architecture* (1972), or Yona Friedman's *Utopies Réalisables* (1974), to name but a few.

4. Utopia Today and Tomorrow

David Harvey argues that within the context of postmodernism – in which we still locate ourselves today - due to the "schizophrenic circumstances induced by fragmentation and all those instabilities", it is almost impossible to coherently picture, "let alone devise strategies to produce, some radically different future"[46]. In other words, the complexity and fragmentation of the world which are present on all social and spatial scales make it impossible to construct *a* utopia, which would act as an ideal alternative to the world we inhabit. And while this might be true in a sense that it is perhaps no longer possible to construct the *same* utopias as we have done in the past – ones which offer grand narratives and singular systems, I argue that the time of producing utopias is all but gone. Like many other methods, genres, and types, utopia of the postmodern also changes. Instead of continuing to produce grand narratives and focusing on the scale of the city, utopia began to propose multiple fragments, present on various scales.

While utopia can still seemingly sporadically be found in the form of all-encompassing grand narratives, these examples often do not offer a critical stance towards their context. Rather, they tend to serve as a method of affirming and strengthening already existing conditions – something more akin to what Ruth Eaton refers to as the "reactive" ideal cities, rather than "proactive" ones[47]. Examples of this are for instance "The Line", a concept currently developed by the Saudi business group NEOM which, although formally reminiscent of Superstudio's *Continuous Monument* project, is described as a "civilisational revolution that puts humans first, providing an unprecedented urban living experience while preserving the surrounding nature"[48]. Another example is the "Masterplanet" (2020), a seemingly abandoned research project by the Danish architecture office BIG in which all aspects of life, production, and the built environment are tackled on a planetary scale.

However, an example which is perhaps more in tune with the critical and "reactive"[49] features of utopia is the multi-format project Planet City (2021) created – or rather curated – by designer and film director Liam Young. The project is described as the only remaining city on Earth which houses the entire human population of ten billion, while the rest of the planet's surface has become wilderness. The setup is quite reminiscent to that of Zamyatin, proposing a totalising utopian world similar to those created during the modernist period. However, the fact that it is assembled out of works created by multiple authors including, among others, the fiction writer Kim Stanley Robinson and sociologist Saksia Sassen, signifies that it is more akin to the examined postmodern examples which deal with

multiple social and spatial conditions, narratives, and points of view, which allows it to critically reflect on the contemporary condition much more successfully.

Aside from sporadically locating productive examples of utopia within traditional architectural practice, I suggest that utopian works can also be found within the wider area of architectural activity. For instance, we can search for utopia in curatorial practices, in which utopian critiques and reflections of multiple individuals or groups are gathered and presented under an overarching topic. A good example of this is the "Twelve Cautionary Urban Tales" exhibition curated by Ethel Baraona Pohl and held at the Matadero in Madrid in the spring of 2019, in which an array of authors from various creative fields were asked "what is an ideal city like?"[50]. As explained by Baraona Pohl, the exhibition aimed to make the assembled artistic and spatial narratives "a useful tool to imagine futures together" in a time "when liberties are repressed, interpersonal and interspecies relationships questioned, and the idea of "surviving" supersedes that of "living""[51].

Another group of similar examples, this time in the form of exhibitions of singular authors and collectives, are those in which the medium of the exhibition is used to bring forward utopian visions as well as activate a discussion. In these cases, the utopias are often structured out of multiple narratives reflecting on various aspects of our societal condition. They include examples such as the Belgian pavilion for the 2016 Venice Biennale authored by the Traumnovelle group which, aside from the conceptual land of "Eurotopie" which is "built upon the ashes of totalitarianism" and "ridicules methodological nationalism and the derelict nation-state"[52], also provided a physical space for possible utopian discourse through the form of the exhibition pavilion itself. Or perhaps the exhibition *Geostories*, together with its accompanying publication, by the architectural duo Design Earth which through a set of projects "becomes a medium to synthesize different forms and scales of knowledge and technological externalities such as oil extraction, deep-sea mining, ocean acidification, water shortage, air pollution, trash, space debris, and a host of other social-ecological issues" (Design Earth, 2018).

Utopia can also be found within numerous teaching practices where architectural and urban design students work on assignments which allow for innovative and unencumbered ways of thinking about future cities and the world. In such educational settings, a much broader and more critical discussion of the status quo is possible. And while sometimes these practices can be based on re-examining historical utopian works and re-interpreting them from a contemporary perspective, other times the projects use some of the established utopian tools and techniques in order to propose new views, or even completely new approaches. Some of the more creative and inventive teaching practices in the recent years have certainly been the Videogame Urbanism course at the Bartlett, led by Sandra Youkhana and Luke Caspar Pearson (You+Pea) or the Studio Adam Caruso of the ETH Zürich which in 2016 and 2017 held studios and seminars titled "Social Structure" and "Structure and Society" which examined multiple overarching social and spatial forms of our society, as well as numerous utopian precedents.

Lastly, I suggest that utopia can also sometimes be found in architectural ideas competitions where authors, given that there is no intention of realisation, often have more freedom in developing critical and innovative narratives. This category of utopias is perhaps the most ambiguous one because it can either offer a possibility for authors to reflect more freely and critically on a specific topic, or it can be overly influenced and steered by the competition brief itself.

Circling back to the concept of heterotopia, I propose that through the multiplicity of ideas whose coexistence it affords, and the multiple readings and correlations which it engenders, the changed form of utopia appears that can be strongly situated within the postmodern condition – one which was triggered by the disillusionment with overarching myths and narratives of the modern movement. Frederic Jameson notes that the "overarching or structural Utopian vision" has been submerged by "a swarm of individual Utopian details, which correspond to the parcellization and thematization of so many individual Utopian opinions and personal or life-style fantasies"[53]. Responding to the plurality and fragmentation of our current condition utopia has refracted "into a multitude of little Utopias – many little islands rather than just one big one"[54], providing multiple possibilities not only for the utopian subjects, but also for providing a critical reflection on our contexts, encompassing their complexity, and addressing numerous topics within the framework of one contextually rooted, fragmented utopian project.

Through this multiplicity of utopian narratives, utopia arrived to the exact position and form from which it can deliver the most relevant critique to the very conditions of our society within our point in time. Not anymore seen as a method of producing totalizing narratives, but rather as a tool for bringing forth voices and conditions which have historically been silenced and overlooked, utopia affords us to delve deeper into the multifaced socio-spatial issues and crises we are faced with today. Utopia gives us a glimpse of a possible future by turning a critical mirror onto our own present, making evident – through speculative narratives – the multifacetedness and complexity of our environment. Bringing focus on the discursive, experimental, and transdisciplinary aspect of the architectural discipline it allows us to engage more productively in conversations regarding our wider spatial, climactic, cultural, political, economic and social milieu.

Notes

1 The full title of the work was *Libellus vere aureus, nec minus salutaris quam festivus, de optimo rei publicae statu deque nova insula Utopia* (*A little, true book, not less beneficial than enjoyable, about how things should be in a state and about the new island Utopia*)

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3 Vieira (2010), 4

4 Vieira (2010), 4

5 Marin, Louis, *Utopics: Spatial Play* (London: The Macmillan Press Ltd., 1984), 9

6 Marin (1984) 10

7 Vieira, Fátima, "The Concept of Utopia", in The Cambridge Companion to Utopian Literature, ed. Gregory Claeys, (Cambridge: Cambridge University Press, 2010)

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9 Knop, Karen. "Utopia Without Apology: Form and Imagination in the work of Ronald St. John Macdonald", *The Canadian Yearbook of International Law* (2002)

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11 Carey, John, edit. *The Faber Book of Utopias* (London: Faber and Faber Limited, 1999)

12 Vieira (2010), 16

13 Vieira (2010), 17

14 Vieira (2010), 17

15 Vieira (2010), 16

16 Vieira (2010), 16

17 Vieira (2010), 17

18 Vieira (2010), 18

19 Foucault, Michel, "Of Other Spaces: Utopias and Heterotopias", *Architecture /Mouvement/ Continuité* (October, 1984), trans. Jay Miskowiec from "Des Espace Autres," (March 1967), 3

20 Vieira (2010), 19

21 Levitas, Ruth, *The Concept of Utopia* (Oxford: Peter Lang, 1990), 213

22 Vieira (2010), 6

23 Choay, Françoise, *The Rule and the Model: On the Theory of Architecture and Urbanism*, 1980 (Cambridge: MIT Press, 1997), 7

24 Choay (1997), 7

25 Choay (1997), 8

26 Choay (1997), 7

27 Choay (1997), 34

28 Coleman, Nathaniel, *Utopias and Architecture* (New York: Routledge, 2005), 24

29 Coleman (2005), 46

30 Coleman (2005), 27

31 Coleman, Nathaniel, "The Problematic of Architecture and Utopia", in *Utopian Studies*, Vol.25, No.01 (2014), 8

32 Coleman (2014), 8

33 Marin (1984), 10

34 In actuality, both utopia as a concept for an ideal imagined society and space, as well as the ideal city as a perfectly geometrically organized space have appeared as ideas and narrative or spatial approaches much earlier with examples including Plato's Republic (circa 375 BC), and the Roman castrum.

35 Eaton, Ruth, *Ideal Cities: Utopianism and the (Un)Built Environment* (London: Thames & Hudson, 2002), 11

36 Eaton (2002), 11

37 Foucault (1984), 1

38 Foucault (1984), 3

39 Foucault (1984), 3

40 Foucault (1984), 3

41 Foucault (1984), 3

42 Foucault (1984), 4

43 Jencks, Charles, *The Story of Post-Modernism: Five Decades of the Ironic, Iconic and Critical in Architecture* (United Kingdom: John Wiley & Sons Ltd., 2011), 125

44 Jencks (2011), 125

45 Harvey, David, *The Condition of Postmodernity – An Enquiry into the Origins of Cultural Change* (Cambridge MA, Oxford UK: Blackwell, 2017), 48

46 Harvey (2017), 54

47 Eaton (2002), 11

48 NEOM, 2022, https://www.neom.com/en-us/regions/theline

49 Eaton (2002), 11

50 Baraona Pohl, Ethel, "Twelve Urban Fables" (2020), 2

51 Baraona Pohl (2019), 2

52 Traumnovelle, 2016, https://traumnovelle.eu/Projects-index

53 Jameson, Fredric, *Archaeologies of the Future – The Desire Called Utopia and Other Science Fictions* (London: Verso, 2005), 218

54 Marin (1984), 176

Image Captions

Fig. 1. Jana Čulek, "The Metropolis", interpretation of Hilberseimer's Metropolis (2022)

Fig. 2. Jana Čulek, "Garden City Street" (2023), depicting Ebenezer Howard's Garden City

Fig. 3. Jana Čulek, "The Thin Grid" (2023), depicting Superstudio's "First City: 2000-ton City", *12 Ideal Cities*

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Biography

Jana Čulek is an architect, urban planner and researcher. After acquiring a Master in Architecture and Urban Planning in at the Faculty of Architecture in Zagreb (HR), in 2014 she continued her studies at the post-master program of the Berlage Center for Advanced Studies in Archtiecture and Urban Design. From 2014 to 2022 she was based in the Netherlands, first working as part of the Rotterdam based KAAN Architects, and since 2019 through her own practice Studio Fabula. In June 2023 she gained her doctoral degree at the TU Delft Faculty of Architecture and the Built Environment (NL) with the Chair of Methods of Analysis and Imagination. She is currently also part of the teaching staff at the Urban Studies interdisciplinary post-graduate specialist program ran by the Delta Lab – Center for Urban Transition, Architecture and Urbanism of the University of Rijeka (HR).

A relational approach to performance
Composition of meaning through Price and Ábalos

Daoudi, Haitam
ETSAM-UPM, DPA, Madrid, Spain, h.dao.bar@gmail.com

Abstract

"Performance" in architecture can be understood as follows: as function, it describes the role that any given element plays in relation to others (reciprocity); as a threshold, it refers to a measuring tool that provides standards against which to compare (attribution); as action, it implies active involvement in the form of a condition that changes (potential). To better define the scope of the word, it should be cross-referenced with three other terms that lie at the intersection of the previous ones: structure, energy and program.

Any proposition that equates "building" to "performance" should consider the full scope of the word, thus constituting a relationship between the two terms on the basis of reciprocity (A=A), attribution (A=B) and potential (A→B). Different buildings will be more or less performing than others not simply on a structural and energetic basis, but also on use and adaptability.

The paper will examine two case studies that explore different approaches to achieve a comprehensive composition of performance. The first one will focus on Cedric Price's work, which emphasizes program. The second case will examine Iñaki Ábalos, who places importance in thermodynamics. Although both strategies differ in their starting point, they ultimately achieve the same outcome of fulfilling the structural, energetic, and programmatic requirements of the building in a positive and compositional way, establishing coherent relationships between these elements.

To ensure the sensible use of the word "performance", it is essential to draw upon significant examples from the past, overlap them with present practices, and develop innovative strategies for the future. This paper provides a framework for evaluating the design of buildings not merely as objects, but as interactive entities that relate both to their surroundings and to themselves.

Key words: performance, Cedric Price, Iñaki Ábalos, program, thermodynamics.

The concept of "performance" in architecture is continually expanding in meaning as technology advances and new challenges emerge for the profession (energetic, social, ecological, …). Yet, the widespread use of the term has often resulted in its misapplication, describing either generic or partial situations. To address this, the meaning of performance will be dissected into the following three constituent components:

- As function, in its verb form "to perform", it speaks of the role that any given element plays in relation to other things. It conveys reciprocity between the subject and its definition.
- As threshold, it refers to a measuring tool that provides standards against which to compare the object of study. It is an attribute that expresses a quality of the element.
- As action, differentiated from "function" because it implies active involvement rather than a predefined state, it is a condition that can change. It speaks of all the things that can happen, thus conveying potential, a gradient of possibilities.

Taking as a starting point this first broad approximation, to better define the scope of the word, it is examined in relation to three other architectural terms: structure, energy and program (Fig. 1).
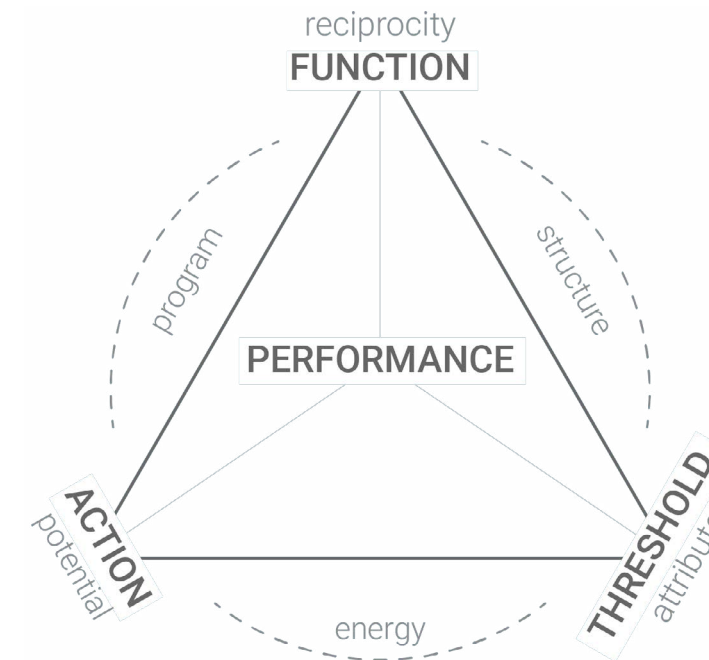
Fig. 1

Starting off with structural performance, it refers to the load-bearing capacity of the elements that make up the building. The design must guarantee the maximum predictability of the behaviour of each component, its stability. In this case, the definition of performance lies at the intersection between function and threshold. On the one hand, function refers to the structural role that is performed by each element, such as column, beam, truss, slab, etc. The different categories define the scope of performance of each of them in a reciprocal fashion (A=A), for example, structural columns transmit loads vertically through compression. On the other hand, the threshold definition implies, for structure, the capacity to perform up to a certain predefined amount of load. It describes an attributive quality that is assigned to the element (A=B), for instance, the slab can support a live load of $100kN/m^2$. Structural performance is presupposed in any built work.

The second case is energetic performance, which refers to the efficiency of the building. It is associated with data science and the heavy reliance on simulation tools and metrics as primary drivers in determining design decisions. It implies considerations that range from the planning phase to the finished form, and its maintenance across time. In the case of the latter, there are two types of means: active (involving mechanical processes) and passive (using natural energy such as sunlight and wind). Contemporary designs involve a combination of the two. The definition of performance here lies at the intersection between performance as threshold and as action. In the case of the former, it expresses an attribute of the subject. In this context, it is usually used with words such as "maximize", "enhance", "optimal", focusing the discourse on energy efficiency. It also relates to the many certifications that provide rating systems for buildings under the scope of words like "green" or "sustainable", that focus exclusively on the amount of energy produced and consumed. Once again, the attributive quality is the dominant here (A=B). Such certifications include the globally recognized LEED or BREEAM that, while

pursuing a notable goal, they should be taken in consideration of other aspects of the building design. When it comes to performance as action, it refers to all the processes that involve flow of energy. MEP (Mechanical, electrical and plumbing systems) play a big role, but passive strategies can also have an important impact. They connect the building to a wider and extremely complex network of utilities that provides all the things that the building can't make on its own.

Both structure and energy, in the sense described above, fall under the scope of what is called performance or outcome-based design, which prioritizes exclusively the meeting of measurable and predictable targets, such as loads, energy efficiency and budgets. It situates the architect as a technical expert, with their work guided by an expanding framework of codes and regulations. This paradigm has given rise to a generation of specialized consultants and led to the emergence of distinct sectors within the architectural profession dedicated to innovation through metrics and simulations. This model's institutionalization is further solidified through the efforts of national and international agencies, which continually update and reinforce industry standards[1].

The third case is programmatic performance, which refers to the act of using the building by living beings or machines. It includes both spontaneous and predefined uses. This is perhaps the most abstract of the three, and as thus goes through less mathematical scrutiny. Nevertheless, it is an important factor in determining the quality of the space in which it takes place. We can differentiate two types of programmatic performance. The first is related to the conventional understanding of program as the planned use for a specific space. The second has to do with improvisation and is more ephemeral, spontaneous. This definition lies at the intersection of performance as function and as action. The former responds to the planned aspects, the use that identifies each space. Action speaks of the sudden flows that arise, the potential properties. In this context, performance is connected to the users, what is expected from them but also what degree of freedom they have for reinventing a certain space.

Now that the scope of performance has been established, taking the previous definitions in mind, an architectural intervention will display varying degrees of compliance to the word depending on the process and priorities of the designers. A highly energy-efficient building might not necessarily be conducive to a working program, just as an imaginative activity does not have to be associated to an ecologically conscious setting. It can be misleading to brand an object, building or act as "performative" in architecture if it does not consider the full scope of the word.

Any one proposition that, in its constitution, equates "building" to "performance", should go through a series of filters that assert the relationship between subject and predicate as stated at the beginning of the essay (reciprocity, attribution and potential), to avoid insufficiency or miscommunication of meaning. Different buildings shall be assessed by a wider range of variants and will have a different degree of performance relative to others based on their structural, energetic and programmatic approaches. The agency that the architect assumes in the design process becomes crucial because it can either allow or hinder the creation of certain relationships between the elements.

This paper seeks the strategies that result in a positive and complete composition of the meaning ascribed to performance, be it through a direct or indirect approach to the outline of the structural, energetic or programmatic aspects of the building and the relations that are created between them. The analysis will focus on two case studies that achieve this objective through different routes, prioritizing specific aspects over others during the design process but ultimately attaining the same outcome. The first is Cedric Price, representing the approach through program. The second is Iñaki Ábalos, representing the approach through energy, more specifically, thermodynamics. Both belong to a genealogy of practitioners and theoreticians invested in tackling the relation of the profession to technology, the environment and society.

1. Cedric Price
1.1. Context and relevance
In the case of Cedric Price, performance will be analysed from the starting point of program. To understand the particularity of his approach, it is necessary to look at his context first. The functionalist movement, exemplified by CIAM in Europe, experienced a notable ideological shift during the mid-century. The concerns of architects and planners moved away from matters of style and aesthetics and turned towards the practical considerations of use and energy efficiency[2]. Price was particularly influenced by, among others, the views of John Summerson, who in his conference "The Case for a Theory of Modern Architecture" placed the importance on program rather than form, in the "social sphere"[3]. A second notable reference is his friend Reyner Banham, who not only argued for the aforementioned point, but also provided an answer to the question of form with his concept of "une autre architecture" (another architecture). According to Banham, program and form are inseparable[4]. Additionally, he delves into questions of climate and energy in his book *The Architecture of the Well-tempered Environment*, which appeared in Price's discourse as well. Finally, Buckminster Fuller was of great influence in matters of technique and bringing industrial experimentation and manufacturing processes to as many people as possible[5].

Cedric Price, influenced by these ideological currents, advocates for an architecture of performance rooted in technological ideas. His approach focused on generating effects through social programs that often centred around unnoticed necessities[6].

1.2. Commodity, firmness and delight
In the interview with Obrist, Price mentions Henry Wotton's translation of the texts of Vitruvius, which defines architecture as "Commodity, Firmness and Delight". Price argues that they "served me well because I can hang anything on them"[7]. There is a correlation that can be drawn between these three terms and the ones proposed for the opening statement of this article referring to performance. Starting with firmness, Price explicitly defines it as structure. For the two remaining words the connection will require some breaking down, as both terms imply a notion of comfort, the first being of the physical kind and the second abstract.

"Commodity is good housekeeping, money". It refers to useful goods that can be purchased for improving the quality of life. In the diagram, it relates firstly to an attributive aspect, as it refers to the character of an element in relation to a whole, the building. Secondly, it connects with potential, as it speaks of something that could or could not be there. These two descriptions place commodity in the same spot as energy. Although the correspondence between them is not direct, it displays the same relational qualities to performance.

Finally, delight is explained as dialogue. Price describes it as follows: "The dialogue involves people with the future and with the intentions, even if only for themselves, that the future might be a bit better than the present". The remaining spot in the diagram is the one belonging to program, which corresponds with the implications of delight, and places it at the intersection of performance as action (potential, things that can happen) and function (reciprocity, correspondence between the subject and its definition). Thus, these terms can be integrated into the initial performance diagram, defining the general scheme for Price's approach (Fig. 2).
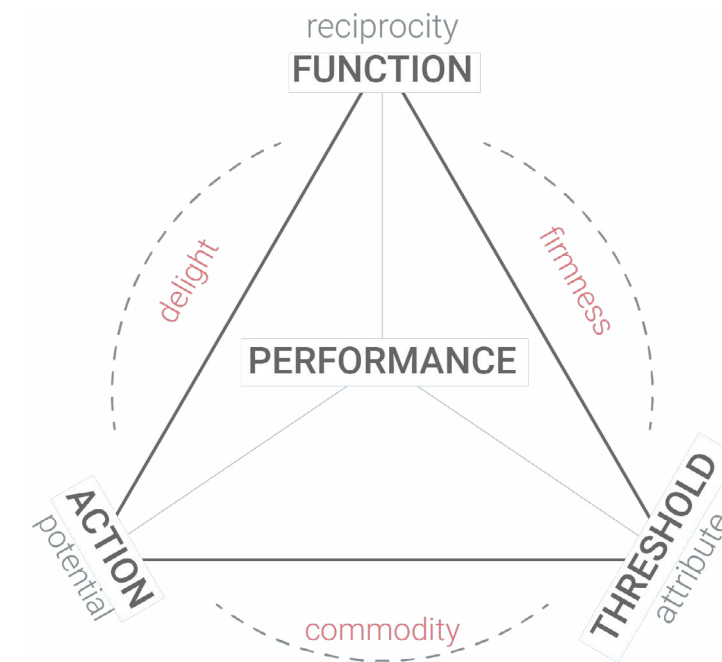
Fig. 2

1.3. Decomposition of program
In the introduction to *Re:CP*, Rem Koolhaas distinguishes between builders and wreckers. He places Cedric Price within the second category, emphasizing its significance for the future despite receiving less attention[8]. A similar idea is echoed by Arata Isozaki in the same book as follows: "Cedric Price tends […] towards what we might call non-design. Or perhaps better said, a preference for dismantling architecture and making it disappear into unconventional systems relevant to social demands"[9].

Price's approach to program is rooted in the idea of uncertainty, allowing room for things to define themselves and granting agency to the user. In his essay "The Invisible Sandwich", he criticizes the methods that fail to challenge, on the one hand, the capacities of the architect beyond merely improving things, and on the other, the user for a lack of observation before taking action. He advocates for the architects to "devise, as in the best music scores, gaps of uncertainty in which the individual can participate"[10]. By building the notion of program through uncertainty, he leaves room for things to define how they want to be, lending agency to the user.

Tying back to performance (Fig. 3), the first step is, starting from the idea of program, to decompose it, not have it respond to matters of "function" of the space, of assigning uses (reciprocity). Conceptually, it would instead lean, in the introductory scheme for this paper, towards "action", leaving room for things to define themselves and change (potential). This undefined program fosters a structure that can be appropriated by different users, characterized by a strong structural logic and a lack of imposed architectural will. This strategy allows Price to create opportunities for "delight" firstly, by asking people what they need, and then for "commodity", by letting them appropriate the space in the way that is most comfortable to them.

Paradoxically, the lack of a rigid programmatic definition allows for specificity, as it accommodates the evolving needs and desires of users. Price acknowledges the delicate interplay between predictability and unpredictability, acknowledging the necessity for their coexistence. In an interview with Hans Ulrich Obrist, he describes predictability as "knowing that there is another train coming along even if we missed this one", and unpredictability as knowing "in where the first train is going to" [11]. This idea describes one of the core strategies for the Potteries Thinkbelt project, in the words of Price, creating a "railway", as opposed to a building, offering a predictable service even though the specific time and duration are unknown [12]. Similarly, in the Fun Palace the program's uncertainty was so instrumental to the project that it constituted both its source of success and downfall, a perspective articulated by Stanley Mathews in his book *From Agit Prop to Free Space: The Architecture of Cedric Price*. The vague nature of the project relied on "potential use", aiming to encourage the users to actively shape their own experiences within the space. In Mathews' words, the Fun Palace was an "event not a 'thing' […], indefinable in conventional terms" [13].

This concept leads to the treatment of time in the Fun Palace. The project was designed with an awareness of its lifespan inspired by the idea of economy of time and money, reminiscent of contemporary outcome-based performance approaches. This strategy aligned the priorities of the stakeholders, including the architect, city council and day-to-day users, instead of extending its duration aimlessly making it a waste. Price viewed it as a way to create "new appetites" rather than solving a problem. It is a strategy to generate dialogue, which to him should be the concern of architecture instead of imposing law and order [14].

The final step in encompassing the meaning of performance lies in the connection between an uncertain program and a sensitive treatment to structure that lacks formal allegiance. Together they compose the "commodity" aspects of the space. However, it is important to note that energy considerations had different connotations at the time. Thinking about energy revolved around the use of mechanical systems in an extensive and wasteful manner, often seen as the default solution in all kinds of situations. Price's perspective was influenced not only by his historical context but also by Buckminster Fuller's ideas of closed systems and over-reliance on machines to solve all problems.

In Price's case, this tendency would often lead to superficial proposals for dealing with systems, especially considering that many of his projects where never realized. For instance, in the Fun Palace, while there is an extensive and detailed description of the structure in both words and drawings, there is only a passing mention of the existence of built-in temperature control and lighting [15]. Years after, in a conversation with Obrist, he speaks of how the Fun Palace was to be conceived as "the first cybernetic building", despite not developing on the details [16]. In subsequent projects like ATOM, the overreliance on machines and failing to describe their purpose is even more evident. Price speaks of a facility called the "Town Brain", envisioned as a supercomputer that would distribute activities and serve the community, but with little further specification [17].
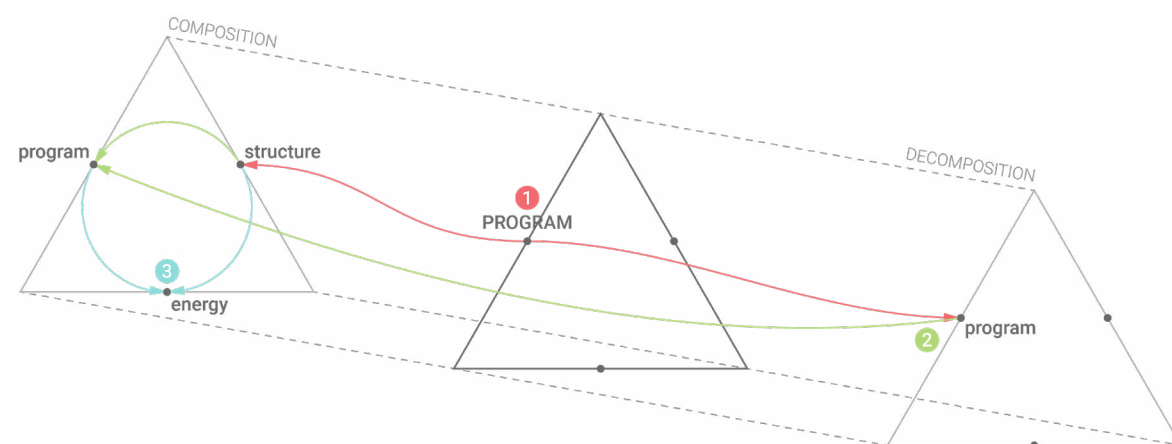
Fig. 3

Summarizing, Cedric Price's approach to architecture was driven by his aspiration to positively impact the human experience by engaging in a dialogue with the user. In an interview with Obrist, he

expressed his goal was to make architecture a better performer [18]. Furthermore, as Stanley Mathews notes, despite the prevalent association of Price's legacy with technology and a high-tech aesthetic, his primary motivation was to respond to pressing social concerns [19]. The programmatic dismantling that he practices is but paving the way for when his works reconfigure themselves again, demonstrating Price's commitment to adaptability and the transformative potential of architecture.

2. Iñaki Ábalos
2.1. Context and relevance

The influences of Iñaki Ábalos are varied, however, regarding the topics of performance and thermodynamics, many of his ideas stem from his explorations of the mixed-use typology. In his book *Tower and Office*, he studies the relationship between structure, systems and program in modern high-rise construction. He discusses how the technical obsession in modernism has guided the evolution of socially, environmentally and thermodynamically efficient approaches in office spaces and mixed-use buildings, particularly towards the end of the past century [20]. A first line of influence can be tracked back to Le Corbusier and the functionalism of the early twentieth century, providing a contextual historical precedent. Other relevant figures for Ábalos include the American architects belonging to the pragmatism line of thought, such as Eero Saarinen and Louis Kahn. Despite sharing ideological similarities with Reyner Banham and Cedric Price, Ábalos' approach, as stated in an interview, is more concerned with the execution of ideas in real-life situations, whether in the references he studies or in his own work with Herreros or Sentkiewicz. Nevertheless, he recognizes the relevance of the propositional work of Banham and Price [21].

Additionally, what sets Ábalos apart is that some of his influences can be identified among the 20th century expressionists, notably in Bruno Taut among others, and his vision to address social issues and improve the quality of life through the expressive aspects of architecture. This places Ábalos' approach to performance at the frontier between technique and culture, science and arts, creating tensions that constitute the relevance of his work to this paper.

2.2. Matter, form and flow

In his closing lecture as Chair of the GSD "Architecture for the Search for Knowledge", Iñaki Ábalos explores mixed-use and hybridization through the analysis of medieval monasteries as a historic precedent to modern prototypes. He centres the discourse around the concept of typologies, stating that they "are not abstract ideas […] and only succeed through a happy encounter of form, matter and flow" [22]. Same as with Cedric Price, there is a correlation that can be drawn between these three terms and the ones proposed for the opening statement of this article referring to performance.

Ábalos conceives typology as the convergence of structural, programmatic, and thermodynamic elements within a building, a concrete unfolding that synthesizes the knowledge gained from prototypes. A typology is performative when it is composed of the appropriate matter (reciprocity), possessing an identifiable form (attribute), and which is traversed by the necessary flows (potential) (Fig. 4).
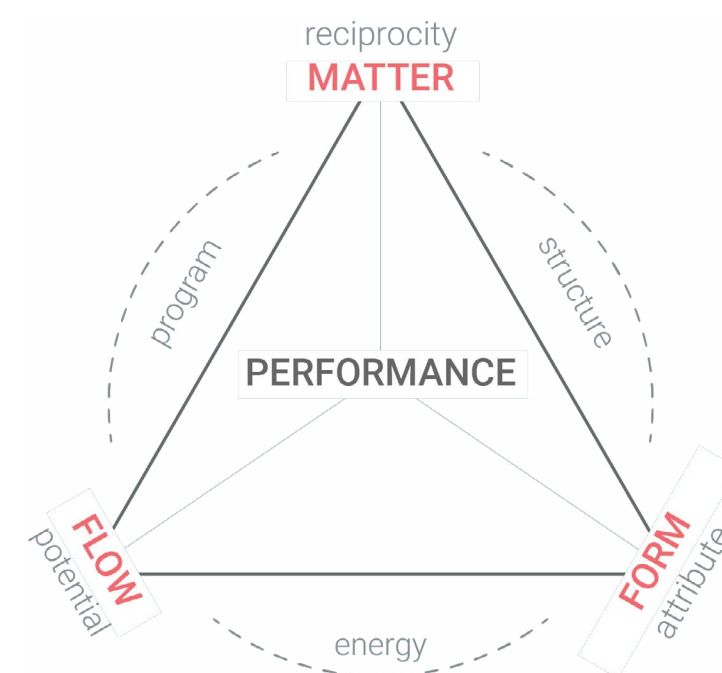
Fig. 4

In alignment with the initial thesis of this paper, structure is obtained through the attribution of a specific form to matter. Energy, or thermodynamics, is defined as the interplay between form and flow. Finally, program emerges from the different flows that interact with, compose or traverse matter.

2.3. Thermodynamics as an active agent

The thermodynamic analysis of architecture that Ábalos advocates goes beyond the simplistic technical approach of minimizing consumption by increasing insulation. The task of the architect should go beyond merely meeting quantitative thresholds, but rather strive to provide a qualitative improvement to life by understanding the building through a thorough knowledge of its materials, techniques and sociocultural context [23].

Whether through his work at his office AS+ or through the examination of notable firms like OMA, BIG, and Herzog & de Meuron, Ábalos maintains that the explorations of mixed-use serve as prototypes for a contemporary reinterpretation of the typology in question. This approach also extended to his position as professor and later dean at Harvard GSD, where he conducted courses that explored the vertical mixed-use type through a thermodynamic lens. As he described in his lecture "Architecture for the Search for Knowledge", the process consisted of two phases that would guide the students towards the development of the typology [24], which will help elucidate how performance is achieved through his personal work (Fig. 5).

The process begins with an initial approach to the project exclusively as a thermal engine. The thermodynamic sensibility of the architect composes the structural and energetic aspects, by engaging matter, form and flow to shape the passive mechanisms of the building. The result is what Ábalos refers to as "monsters", compositions that provoke the designer and which serve as a foundation for the second phase [25]. The objective is to leave things open and generate situations conducive to many possible outcomes.

The next step consists of confronting the results of the first one. The overly designed structure is decomposed into its essential parts. As Ábalos puts it, the designer's task is to "to identify individual research projects to critically confront the inconsistencies, redundancies, and excesses of the first phase" [26]. This curatorial task addresses the uncertainty generated in the initial step, refining the particularities of each space from a broad conception of the program to its specific definition.

Finally, the revised structure along with the initial thermodynamic scheme define the limits of the program through the harmony between matter, form and flows reflected through the convergence of the structural, energetic and programmatic aspects of the building. The goal of this process is to carry out experiments that generate novel forms to approach architecture and society, in Ábalos' words, "a conceptual reformulation of its social, urban and methodological implications" [27].

Ábalos' approach can be summarized as a path towards innovation, for creating new typologies by understanding the previous ones. His purpose is, in the words of Nietzsche, whom he cites often in his discourse, to search for knowledge, even in the undesirable results, by understanding them as either models or countermodels for new possible ways of living [28].
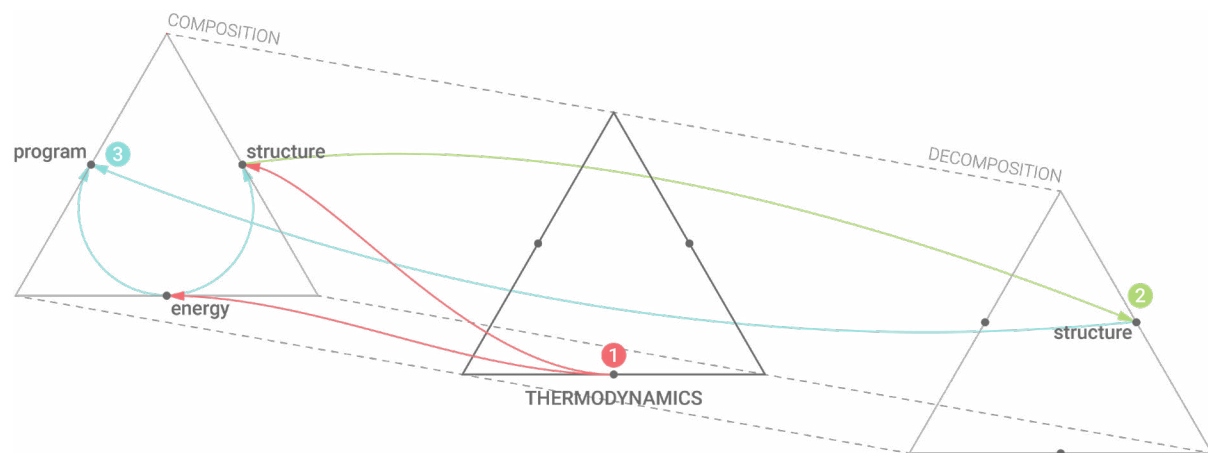
Fig. 5

3. Closing remarks

To respond to contemporary social, technical and sustainability demands, there is a need to revisit the concept of performance. Its widespread use in describing generic or partial conditions has diluted its meaning. To address this, a comprehensive framework was established to encompass the full scope of performance and enable its precise application, revolving around the harmonious integration of structure, energy, and program.

In his lecture "Aiming to Miss" [29], Price highlights some fundamental lessons he extracts from his work, some of which are reiterated by Ábalos, that are relevant to the scope of performance defined

previously. Starting with the importance of the process instead of the product, it allows to develop more innovative designs that could adapt to changing circumstances. Additionally, they both highlight the significance of embracing indeterminacy and exploring alternative paths as a way to achieve desirable outcomes. The design process is an opportunity for experimentation, which is why Price speaks of it as play and Ábalos as prototyping. Finally, collaboration and interdisciplinary perspectives are vital elements in both of their approaches.

Both architects emphasize the significance of the process in creating innovative solutions. Society nowadays demands for changes that the architecture timeframe has a difficulty catching up to. By approaching buildings as interactive entities, as "thermodynamic machines" in the case of Ábalos or "useless architecture" for Price, they stress the importance of responding to the changing societal requirements and developing strategies that address present and future challenges.

Ábalos proposes a thoughtful and holistic approach that combines science and affects. He emphasizes the need to question the "what" and "why" rather than solely focusing on the technical "how". Price's famous rhetorical phrase "Technology is the answer, but what is the question?" echoes this same sentiment, cautioning that while technology can be used as a tool, it should not be seen as the objective and solution to all of architecture's problems.

When performance is approached from both a quantitative scientific perspective and a qualitative affective one, it can become an effective mechanism for quality assessment, evaluating the response over time of the building to both presupposed and unanticipated situations. It no longer describes a singular state, but instead represents the spaces of possibility which are conducive to different actualizations of architecture. Performance is not a fact, but a faculty of the building of constant realignment with itself and its surroundings.

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Image Captions

Fig. 1. Conceptual approach to performance (created by the author).
Fig. 2. Conceptual approach to performance in Cedric Price's vocabulary (created by the author).
Fig. 3. Scheme for Cedric Price's approach to performance through program (created by the author).
Fig. 4. Conceptual approach to performance in for Iñaki Ábalos' vocabulary (created by the author).
Fig. 5. Scheme for Iñaki Ábalos' approach to performance through thermodynamics (created by the author).

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Biography

Haitam Daoudi is an architect currently undertaking the Master's in Advanced Architectural Project at the ETSAM – UPM in Madrid. He earned his Architecture degree in 2021 from IE University, after which he undertook a semester as a Postgraduate Fellow. His research interests revolve around the study of the overlap between science and affects through the application of philosophical concepts and methodologies to architecture.

From sustainable development to sustainable (urban) engagement
The evolution of a concept

Duarte, Clarissa[1]; Magalhães Costa, Mariana[2]
1. Université Jean Jaurès (UT2J), École Nationale Supérieure d'Architecture de Toulouse (ENSA), Laboratoire de Recherche en Architecture (LRA), Toulouse, France, clarissa.duarte@unicap.br
2. Université Jean Jaurès (UT2J), École Nationale Supérieure d'Architecture de Toulouse (ENSA), Laboratoire de Recherche en Architecture (LRA), Toulouse, France, mariana.magalhaes-costa@toulouse.archi.fr

Abstract

Since its introduction in the 1987 Brundtland report, the term "sustainable development" has become a central concept within discussions concerning societies' growth. Essentially, it refers to the harmonization of economic growth and social inclusion with environmental preservation, meeting the needs of the present without compromising the future generations' own needs. However, the dominance of the economic element among specialized literature seems to have assigned the social and environmental to secondary roles, thus creating an imbalance in this tripod.

After over 30 years of its use, there has been continued questioning as to the term's current pertinence. "Development" can be associated with economic activity and its subsequent damages to the environment, while "sustainable" is perceived as too broad and outdated, especially given the surge of the climate crisis. The 2021 WG1-AR6 UN Expert Panel (IPCC) report demonstrated how "unequivocal" it is that human activity has directly contributed to the heating of the atmosphere, oceans, and land and how we need to act fast.

With the aim of verifying the terminology and notion evolution among climate discussions, firstly a study was conducted investigating the COP reports from the last 30 years, considering a 10-year interval between editions: the reports from Rio (1992), Johannesburg (2002), Doha (2012) and Sharm el Sheik (2022) were analysed, as well as Stockholm (1972), the first world conference on the environment.

In the second part of the article, we will reinsert the "sustainable development" concept in the urban context in order to question its relevance within an irreversible scenario of global overurbanization. Finally, we will reflect on the importance of society's radical and urgent involvement towards the construction of healthier, fairer, more welcoming, and more resilient urban ecosystems. Is there another term capable of accelerating the necessary urban transitions?

Key words: sustainable development, sustainable urban engagement, urban governance, ecological transitions, urban planning.

1. Introduction

Published in March 2023, the Intergovernmental Panel on Climate Change (IPCC) AR6 Report has demonstrated that human activity has "unequivocally" contributed to the rise of the global surface temperature. In 2011-2020, the average temperature reached 1.1°C higher than 1850-1900 records.[1] The AR6 report suggest a need for urgency, stating that the next decade will be decisive and that measures taken in the near future will have an impact over the next 1000 years.

A narrative shift regarding the environment is already being adopted by the media. News agencies, such as The Guardian, have modified certain terms in their articles to emphasize urgency.[2] 'Climate change' has been replaced, for example, by 'climate crisis' or 'climate urgency'.

A deep understanding of the meaning of words used to describe a particular issue is crucial for the discussion around it and its subsequent evolution. We begin to see the emergence of new projects that contribute to climate literacy (the comprehension of climate-related terms). One such project is "Climate Words"[3], winner of the 2023 The World Around Youth Climate Voice Prize.[4]

Within this context, we propose a critical reflection around the term "sustainable development," a term that, despite being widely used by several governments and international institutions over the past 40 years, is controversial considering the accelerated environmental degradation that has occurred over the same period because of the economic "development". Thus, even though we are aware that narratives by themselves do not change the world, we understand that they have a significant role in the understanding and solving of the problem.

2. Historical Context

The term 'sustainable development' officially appeared in the 1980s, amidst the aftermath of the 1970's energy and economic crisis, and after a sequence of environmental disasters, such as the Amoco-Cádiz shipwreck (1978) and the explosion of the Chernobyl Power Plant (1987). It first appeared in the 1980 "World Conservation Strategy - Living Resource Conservation for Sustainable Development" report [5], produced collectively by IUCN, FAO, UNEP, UNESCO and WWF International. It became more widespread, however, after the publishing of the 1987 Brundtland report, entitled "Our Common Future". Organized by the World Commission on Environment and Development, this report presented the concept of sustainable development as follows:

"Humanity has the ability to make development sustainable to ensure that it meets the needs of the present without compromising the ability of future generations to meet their own needs. The concept of sustainable development does imply limits - not absolute limits but limitations imposed by the present state of technology and social organization on environmental resources and by the ability of the biosphere to absorb the effects of human activities. (…) The Commission believes that widespread poverty is no longer inevitable. Poverty is not only an evil in itself, but sustainable development requires meeting the basic needs of all and extending to all the opportunity to fulfil their aspirations for a better life. A world in which poverty is endemic will always be prone to ecological and other catastrophes. (Our Common Future)[6].

In short, sustainable development is perceived as the harmony between environmental, social and economic growth. Yet the primacy of the economic pillar, highlighted by the priority given to it in several texts, has generated over time a disequilibrium in this tripod. After more than 30 years of its use, we observe a growing questioning towards both terms that make up this concept: the notions of "development" and of "sustainability".

Although the literal definition of development is "the evolution, improvement or enhancement of an object", we cannot disregard its political connotation. The term 'development' emerges in economic theory at the end of the Second World War, as a by-product of the Cold War. In a polarized political context, the term was associated with the Western lifestyle, with the accumulation of material possessions and even with the destruction of nature and culture.[7]

Sustainability, on the other hand, implies the continuity of an outdated and harmful lifestyle in the face of the environmental crisis. There is a realisation that our daily habits and production models are in fact 'unsustainable'. The term is also considered too broad or 'greedy' since it aims to encompass too many topics at once - from biodiversity and pollution reduction (environmental issue) to growth (economic), gender equality and access to education (social)[8]. As a result, it has become increasingly difficult to identify what is 'sustainable', since the term is present in a wide range of documents, from climate reports to marketing campaigns, many of which are regarded as 'greenwashing'.[9]

In 2015, the UN launched its 17 sustainable development goals (SDGs). The 11th goal is to "Make cities and human settlements inclusive, safe, resilient and sustainable". It is estimated that by 2050, almost 70% of the population will be living in urban centres[10]. Cities must therefore be at the heart of the discussion and the combat against the climate crisis. Given the need to reflect on the term 'sustainable development' and the notion that cities need to be part of the solution, we question whether there is another term with the potential to bring the narrative closer to practice, thus accelerating the necessary

transformations. Is there a term that will serve as a catalyst for the employment of sustainable urban interventions?

3. Analysis of the COP reports from the last 30 years

In order to understand the term "sustainable development" and its importance within the international debates, it is necessary to evaluate its evolution over time. We analysed 5 of the UN Conferences of Parties (COPs) reports published over the past 50 years. They were selected considering a 10-year interval between the editions. The analysed reports were Stockholm (1972), Rio (1992), Johannesburg (2002), Doha (2012) and Sharm el Sheik (2022).

3.1. Adopted Methodology

1) Firstly, a search in the UN website (https://www.un.org/) was carried out and the selected reports were the ones that included the main themes discussed in each of the previously chosen COP editions.
2) Starting with the oldest report (Stockholm), keywords in the title and in the index were determined. It was considered that their presence in these segments highlighted their importance. The criteria for determining the keywords were whether they were related to the sustainability tripod (social, environmental, economic) or if they were action oriented (such as implementation, information, adaptation, mitigation, etc.).
3) Once the keywords were defined, a search was conducted to verify the number of repetitions throughout the document. Three different levels were considered: the presence in the title, quantity in the index and quantity in the entire document.
4) The reading of the paragraphs in which these 'keywords' were found allowed for a better comprehension of the discussion and permitted the definition of new 'associated keywords'.
5) A new search would be conducted to verify the number of repetitions of the 'associated keywords'.
6) The 'keywords' and 'associated keywords' raised in the earlier report would serve as a basis for the search in the following reports.
7) We would proceed to the next report, quantifying the keywords raised in the previous report and repeating steps 2 to 6.
8) At the end of the examination of these 5 reports, adding new keywords at each reading, a countermovement was initiated. A verification if the keywords identified in the most recent reports were already present in the previous ones.
9) A table displaying the keywords quantities per edition was created. There was a great disparity between editions due to the varying number of pages amongst the different documents. We then divided the absolute number of repetitions by the number of pages to obtain an average of keywords per page.
10) For the results display, we opted for the creation of word clouds, which emphasize each edition's priorities. These word clouds were created using this website: https://www.wordclouds.com/

3.2 Results

Fig. 1

3.2.1. Stockholm (1972) and Rio (1992)

Most recurring keywords: *Environment* (Stockholm) and *Development* (Rio) (Fig. 1).

The Stockholm 1972 report was the first one to be analysed. The priority given to the economic aspect is evident since this was a moment of growing concern over unemployment, especially due to the demographic boom from the 1970s.[11] At the time, the term 'sustainable development' had not yet been introduced and, therefore, is not present in the document. The closest to it was 'sustained', with only one incidence.

The title's keyword – human environment – demonstrates an anthropocentric vision seeing as it highlights the human's environment over the natural one, which is home to other species. Although the

main keyword is environment, the document establishes a separation or distance between the human and the natural environments.

The Rio conference is recognized as the first COP and subsequent editions have been numbered after it. It was held in 1992, in a relatively peaceful and good willed interval between the end of the cold war and before the terrorist attacks of September 11th, 2001. Among the report's main recommendations, there is greater firmness and proactivity in terms of sustainable development and combat against poverty than in the former report, published 20 years earlier.[12]

Rio 1992 report's title brings the joint concept of 'Environment and Development', an expression that is frequently repeated in this same order throughout the document. 'Sustainable development' is already present, though briefly so. Nonetheless, as it can be observed through the word cloud, the most recurring word in the document is 'development', which demonstrates that, despite the environmental concern, the importance economic development is always implicit.

Each of these documents draws focus to specific issues. While in the Stockholm Report index one can already see the importance attributed to Marine Pollution, in the Rio Report, greater focus is placed on forest conservation.

A few additional observations that are worth mentioning: the substitution of the word 'mankind' for 'humankind' (although mankind still appears once in the Rio report); the abolition of the keyword 'human environment' in the Rio Report; the considerable increase in recurrence of the term 'information', which denoted a concern over the public awareness; and finally, in the Rio report, the term 'pandemic' was identified because of the AIDs pandemic.

3.2.2. Johannesburg (2002) and Doha (2012)

Most recurring keywords: *Development* (Johannesburg) and Climate (Doha) (Fig. 2 top left and right). The Johannesburg report maintains Rio's tendency with 'Development' as the predominant keyword, although 'sustainable development' has also risen to become the second most recurring one. Concepts such as 'globalization and globalizing world' emerge, which reveal a more systemic and holistic vision, though still reflecting a westernized point of view.[13] The term 'mankind' has been entirely replaced by 'humankind'. There is also greater attention to gender equity and representation.

The greatest transformation in terms of semantics was observed in this interval between 2002 and 2012. While the previous editions dealt with more specific problems, such as marine pollution, pesticides, deforestation, and droughts, in the Doha report we notice a more global approach. This is evident through the text's most predominant word - climate. It gives the impression that the environmental issues were previously compartmentalized and are now perceived in a more integrated and systemic way. 'Sustainable development' is still present in the text yet with less prominence, ranking 20th among the evaluated key words.

Basically, in this 10-year interval analysis, the Doha report marks a shift from a more local perspective towards a global one. The term 'globalizing' fades yet worldwide concepts such as 'climate', 'climate change', 'mother earth' gain importance, as do terms closely related to attitudes and measures like 'financial mechanism', 'fund', etc.

Fig. 2

3.2.3. Sharm El Sheik (2022) and summary of the 5 reports

Most recurring keyword Sharm El Sheik: Climate (Fig. 2 bottom left).

Sharm El Sheik follows Doha's tendency with 'climate' as its most recurrent keyword. Variations on 'climate' are also strongly present, such as 'climate change' and 'climate finance'. We observe the total disappearance terms such as 'globalization' and 'globalizing world'. Their influence, however, remain, since a global discourse is absolute throughout the document. Specific themes like 'droughts' or 'pesticides' for example, vanish while there is the enhancement of planetary issues such as global average temperature. 'Sustainable development' still exists in the document even though it occupies the 20th spot amongst the most recurring analysed keywords.

Social agendas such as 'poverty eradication', 'food security', 'hunger' and 'gender equality' acquire greater importance. Once again, the term 'mother earth' appears, which links the discussion to matters of the earth, nature, and gender.

Action related terms are also present, though their application is mostly in the institutional spectrum, like 'financial mechanism' or 'green climate fund', which are already presented in the index. Mitigation, which may be defined as damage reduction, is also repeatedly mentioned. In other words, the actions now aim not only to preserve but to reverse ongoing deterioration.

As for the summary world cloud, the 20 top key words from each report were selected and their recurrence per page was compared to demonstrate their intensities. The main keywords were 'development', followed by 'climate' and 'environment' (Fig. 2 bottom right).

3.3. Literary review conclusion

The literary review of these five COP reports aimed to provoke a reflexion over the advancement of the UN's environmental narrative over the past 50 years and an understanding of the evolution of the 'sustainable development' concept within this context. A total of 121 words were analysed, chosen based on the sustainability tripod (social, environmental, and economic) and in terms of action. The selection was an outcome of the previously mentioned methodology, which does not exclude the possibility that other words could have been included.

Among the research's limits, there is the repetition of certain terms in different situations, like 'development, economic development, sustainable development' or variations such as "economical, economically, environment, environmental, environmentally, etc". 'Information' or 'management', for instance, are isolated terms that can be quite vague depending on the context. The 10-year interval permitted an analysis with a constant timeframe however, as a result, relevant editions like Kyoto COP 3 (1997) or Paris COP 21 (2015) were not considered.

Nevertheless, we consider that the review has led to some valid conclusions. We could observe a general movement from a more local discussion towards a more global overview. On one hand, this involves many parties in the search for solutions. On the other, the problems are no longer detached, but rather interconnected and more complex. Sharing the responsibility involves collective cooperation and therefore a slower process. Many of the documents' goals refer to measures in an institutional level so, despite a variety in terms of action words, their applicability is still a major challenge.

4. Sustainable Development at the urban scale: between narratives and actions

'*Cities are here to stay, and the future of humanity is undoubtedly urban, but not exclusively in large metropolitan areas.(…) With concerted policy action, it is possible for cities to avoid either of the high damage or pessimistic scenarios and instead emerge into a more optimistic urban future."*
ONU-Habitat, 2022[14]

In Abril 2020, the Sustainable Development Solutions Network (SDSN) surveyed the SDG community and asked which were the biggest challenges and obstacles towards achieving the Sustainable Development Goals.[15] The two main answers were: Lack of political leadership (almost 70% of the answers) and lack of awareness among the public and policy makers (almost 60%). According to the interviewees from over 104 countries, there is a general impression that the sustainable development narrative promoted by policy makers has been unable to sensitize or mobilize the population in direct proportion to the climate urgency. Hence, a few questions arise: Between the institutional narrative and lifestyle changes, are we really migrating towards a more sustainable praxis? What are the tools available to connect both poles?

In "Pedagogy of the Oppressed", Paulo Freire emphasizes that it is "*essential to shorten the distance between what is said and what is done, so that in a given moment, your words will become your actions*"[16]. Freire defended that the search for pedagogical tools would enhance the reading comprehension not just of words, but of real-life situations and, in a broader sense, of the world. According to Benoit Peuch, Freire's foundational work is a revolutionary theory.[17] Its aim is to deliver the means for the people's emancipation from the dominance imposed by the current social order.

Taking into consideration the AR6 report's statement about the "unequivocal impact of human activity on the global temperature change", one might suggest that our society's development from the past 50 years was headed in the opposite direction of what might be considered sustainable.

4.1. The UN-Habitat World Cities Report 2022 review
In addition to the COP reports analysis, a semantic review of the "*World Cities Report 2022: Envisaging the Future of Cities*" was undertaken, examining the relationships between 'intentions' and 'actions' on an urban scale. The document's main objective is to set guidelines to help "*urban areas prepare for a dynamic and unpredictable future*". The disruptive nature of Covid-19 and high inflation have demonstrated how cities worldwide are ill equipped to deal with the magnitude of the social, environmental, and economic changes expected for the foreseeable future. The report continues to say that "*Building economic, social and environmental resilience, including appropriate governance and institutional structures, must be at the heart of the future of cities*."[18]
Our investigation here aimed to identify the foremost approaches to approximate theory and practice, through an analysis of two key semantic aspects: 1) the recurrence of keywords present in the title, index and main text of the document; 2) the order of priority between the three pillars of sustainability. We aimed to answer the following questions: a) Which keywords are being used to address sustainable urban planning worldwide? b) considering that the 'sustainable development' narrative implies a balance between the social, environmental, and economic pillars, are they being equally and fairly represented?

Fig. 3

As we observe the UN habitat's "Envisaging the future of cities" word cloud (Fig. 3), we notice a return to the local scale. An approximation to the urban scale and a desire for action. The city is being perceived as a place of experimentation in terms of sustainable urban politics. There is an intention to unite policy makers' narratives and people's lifestyles. As we identify the five most recurring terms in the document (cities, future, development, economic and health), we observe once more the priority attributed to 'development' and 'economic' over 'health, for example. With these words, we could write the following sentence: "cities of the future will be developed economically and healthily". This constructed message brings us to our second question about the order of priority between the three pillars of sustainability: Is there a dominant one?
In an analysis of the recurring percentages of 'social', 'environmental' and 'economic' terms within the report, we identified that the 'economic' predominated with 47% of mentions, followed by 'social' (28%) and lastly environmental (25%). Considering the word order, it caught our attention that 'economic' would come in first place most of the times that these concepts were mentioned together. That is, the referred equilibrium of the sustainable development argument does not correspond to the underlying tone of this document (nor that of the previously analysed COP reports). We ask ourselves: how much does this disequilibrium impact our comprehension of the concept and how do we apply it in our daily routines? Since over the past decades there has been an expansion in consumerism in direct proportion to social and environmental degradation, it becomes clear that there is still long way to advance towards reaching a coherence between the sustainability narrative and its applications in an increasingly urban society.

SUSTAINABLE DEVELOPMENT:
The evolution of a concept
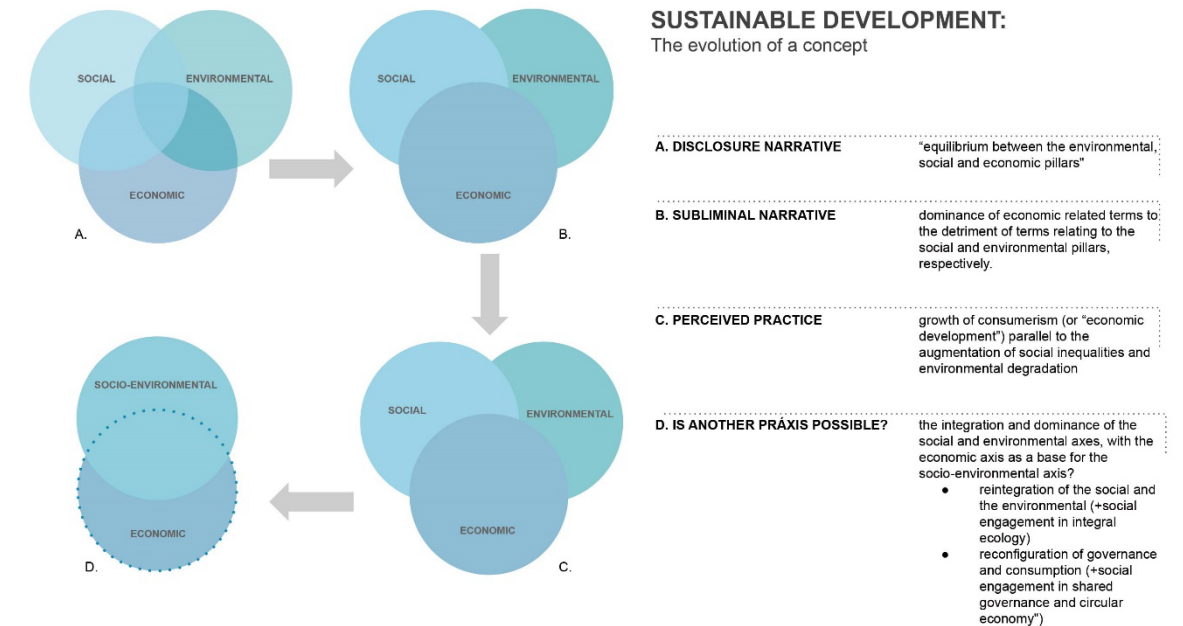
Fig. 4

The predominance of the 'economic' aspect, wouldn't that be the greatest obstacle to a more equitable understanding of the sustainability narrative? According to Sylvie Brunel (2018) "*the sustainable development follows the market forces above anything else*". The author claims that its definition "*does not condemn the mechanisms of liberal society*", which in a sense confirms our reasonings and highlights the importance of a critical review of the concept. Should it be that 50 years after the first global event to discuss environmental protection we should merely be mitigating the damages provoked by economic activities? Even if it comes down to the urban and local scale, does it not remain an exceedingly commercialist approach?
It seems clear that we face a semantic transition challenge but, above all, a necessary shift in governance and action models. There is an urgent need to identify tools capable of re-signifying the policies and reconnect them with new socio-environmental and political-economic practices.

4.2. Which are the possible strategies and actions for achieving urban sustainability?
As previously mentioned, the UN habitat World Cities Report 2022 defends that through "*collaborative, well-coordinated and effective multilateral interventions it is possible to achieve a more optimistic future*".[19] Specifically, the UN recognizes participatory urban governance as a key element for obtaining more sustainable cities. To implement these guidelines, the report highlights nine strategies [20]:

– Transformative *policies* to eradicate poverty and inequality;
-Productive and inclusive urban *economies*;
-*Sustainable financing;*
-Greener *investments* for sustainable consumption and production patterns;
-Responsive urban and territorial planning;
-*Prioritization of* public health;
-Collaborative and integrated systems of *urban governance;*
-Inclusive deployment of *innovation and technology;*
-Building resilience.

It is worth noticing that these procedures begin predominantly at the institutional level, in a 'top-down' approach. There are, however, 'bottom-up' approaches that rise from popular action yet are equally effective. One example is the *tactical urbanism*, which can be defined as a neighbourhood building and activation approach using short-term, low-cost and scalable interventions and policies. It is a response to the conventional methods of city making. Its solutions are not fixed, but rather flexible and adaptable. It is an optimist movement which believes in the power of local activations.[21]
The *tactical urbanism* approach brings out the important role of *public engagement*. Even though it often starts 'bottom-up' through local and temporary interventions, it is a mechanism that has also been incorporated by governments to test ideas and see if they could be replicated elsewhere in the city. Some cases are the Ground Play San Francisco[22] which regulates norms for the locals to building their

own *parklets*, or initiatives that close roadways for public leisure during the weekends, like the *Av. Paulista* or the *Minhocão* in São Paulo, Brazil. Also in Brazil, in response to those who consider the collaborative process to be a constraint that decelerates the urban planning process, Recife's *Citizen Center Plan* understands the opposite. Rather that society's collaboration is an important catalyst and crystallizer in the work process. This allows for the execution of a plan that, even in the midst of so many obstacles, always pursues the inclusion and integration of local citizens."[23]

A variety of collectives and non-governmental institutes dedicated to urban sustainability have emerged in several countries over the past years. The Gehl institute, from Copenhagen, is one of them. Focused in "*working with cities and communities to promote equitable, healthy and sustainable spaces for all*", the Gehl institute produces (among other things) local and short-term activations, which serve as educational opportunities and research for future projects and policies[24].

Another initiative that has been applying the SDG concepts into the urban scale and working in a collaborative manner is the New European Bauhaus (NEB), which connects the European Green Deal policies[25] to daily lives and living spaces. Projects such as the NEB Lab create tools and frameworks that can help achieve a green transition in a tangible way in and in specific locations. NEB Lab teams work with the local community and with different agents through a cross-disciplinary approach. Some examples are the *NEB Lab: New European Bauhaus on the Danube (NEBoD),* a think-and-do-tank, which connects over 10 countries along the Danube region in the implementation of more responsible land use practices, or the *NEB Lab goes south*, a community-led project that connects six architecture schools from Portugal (Porto), Spain (Valecia), France (Toulouse), Italy (Bologna), Croatia (Zagreb) and Greece (Athens), in sharing knowledge and tackling solutions to extreme weather events, such as drought and desertification, in the architectural education.[26]

One way to attract investment to the urban field is to emphasize the positive impacts on public health. Health is indeed an urban issue, and it is in everyone's interest. It is also a friendlier and more accessible approach. As explained by the Urbanism Agency of Toulouse (AUAT) "*health is present across the wide range of urbanism topics". As we associate health to the notion of integral ecology* [27], it becomes obvious that a sustainable urban planning model should integrate all these different variables and lifeforms.[28] Studies have shown that greater biodiversity in cities has a positive impact on the population's health, particularly for children's development.[29] The concept of the *biophilic city* takes that into consideration, by inserting nature creatively wherever possible, be it on the roofs, facades, vacant lots, urban gardens, green corridors, or parks.

The World Cities Report 2022 brings up the "15-minute city concept" as a political tool and exemplary practices in making cities more resilient.[30] According to the author of this concept, Carlos Moreno, "*the 15-minute city is a way to inhabit places, to bring back a dose of humanity to our streets and life to the heart of the cities*"[31]. He explains that covid-19 forced us to interrupt our cities' accelerated pace and enforce proximity policies. With this, it became clear that the street can (and should) have a fundamental role in connecting citizens.[32] The UN report also highlights "*the vital roles public open green spaces such as streets, cycling lanes, squares and parks have in driving economic development and contributing to human health and well-being*".[33]

5. Conclusion – Towards a Sustainable Urban Engagement
Through the analysis of the COP reports, the evolution curve of the term 'sustainable development' in the debates became clear, ascending since Rio 1992 and gradually weakening after Doha 2012. As we observed an increasingly globally oriented narrative, the term may have become too diffuse. From the need of greater tangibility and applicability, the 17 SDG were launched. With a greater call to action, we begin to see different initiatives to implement these concepts in the urban environment towards a green transition. In the "UN Envisaging the future of cities" report, as in the cited guidelines, strategies and case studies, the importance of collaboration became evident. The involvement of different actors in the implementation of sustainable urban is a vital part of the process.

Seeing as there is direct link between the accomplishments in sustainable urban practices and the social engagement of local citizens, we would like to suggest a different term when talking about the future of our cities: "sustainable urban engagement" (Fig.5).

The choice to stick with the 'sustainable' term seems unequivocal to us given its history and continuous presence in debates over the decades, even if it might seem at times broad or subjective. With the creation of the 17 SDGs, sustainability has obtained greater strength and relevance, inspiring numerous projects and contributing to the enhancement of life quality for the present and the future. The questioning related to the 'development' part of the term is due to its overly economical connotation. The notion of engagement, however, denotes an active participation and involvement. 'Sustainable Engagement' is not a new term[34] and has been introduced in other contexts. Yet, our intention here is to shine a light in public engagement and the sense of belonging in the city. That is why we added the word 'urban' to bring focus to our field of work.

In *Manifeste pour un urbanisme circulaire*, the urbanist Sylvain Grisot warns that "*the worst risk is not climate related, it is to see the citizens, professionals and politicians draw back in the face of complex*

challenges and refuse to dialog". He places citizen dialog at the centre, like a start button for the necessary transitions and transformations of the contemporary cities. Through this critical essay, our aim was to contribute to the dialogue around the guiding concept of urban sustainability and highlight the importance of local actions and collective power in the construction of resilient cities.

We see the potential of a tactical and shared governance model driven by activations in the streets and public spaces (of temporary nature or not). Beyond producing mere interventions in the urban space, the combination of shared governance with local action can stimulate the necessary transitions in governance models and consequently sensitize the population towards new types of urban living and social interactions. Hence, the pillars that make up the "Sustainable Urban Engagement" concept should be less based on competition and more on cooperation.
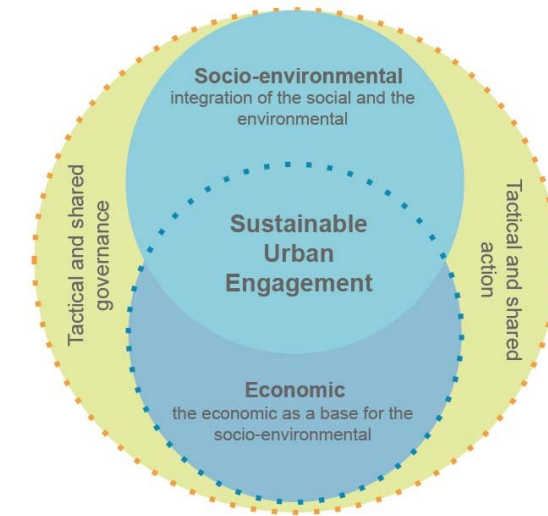

Fig 5

Notes

1. Intergovernmental Panel on Climate Change (IPCC), "Synthesis Report of the IPCC Sixth Assessment Report (AR6)", 6.
2. Sophie Zeldin-O'Neill. *"It's a Crisis, Not a Change': The Six Guardian Language Changes on Climate Matters"*, The Guardian, 2019.
3. https://climatewords.org/, access in 24 May 2023.
4. https://theworldaround.com/ycp/, access in 24 May 2023.
5. International Union for Conservation of Nature and Natural Resources et al., orgs., *World conservation strategy: living resource conservation for sustainable development*.
6. UN Secretary-General e World Commission on Environment and Development, *"Report of the World Commission on Environment and Development*,1987, 16.
7. Sylvie Brunel. *Le développement durable*, (Paris: Que sais-je ?), 16.
8. Sylvie Brunel. *Le développement durable*, (Paris: Que sais-je ?), 53-54.
9. Originally coined by Jay Westerveld in 1986 in reference to the hotel industry, 'greenwashing' is when a government, company or NGO promotes itself as environmentally friendly, yet does not (or scarcely) contribute to environmental preservation, spending more resources in advertising itself rather than engaging in environmental practices.
10. UN Habitat, *"World Cities Report 2022 - Envisaging the Future of Cities"*, 2022, xv.
11. Sylvie Brunel. *Le développement durable*, (Paris: Que sais-je ?), 26.
12. Sylvie Brunel. *Le développement durable*, (Paris: Que sais-je ?), 33.
13. Sylvie Brunel. *Le développement durable*, (Paris: Que sais-je ?)
14. UN Habitat, *"World Cities Report 2022 - Envisaging the Future of Cities"*, xv-xvi.
15. *Desenvolvimento sustentável e agenda 2030 Oeiras Solidária.* https://oeirassolidaria.cm-oeiras.pt/wp-content/uploads/2021/02/SAPANA-Manual-M%C3%B3dulo-2.pdf; 12, access in 11/04/2023.
16. Excerpt translated from portuguese by the authors.
17. Benoît Peuch, Paulo Freire, La pédagogie des opprimés. 2022.
18. UN Habitat, *"World Cities Report 2022 - Envisaging the Future of Cities"*, xvi.
19. UN Habitat, *"World Cities Report 2022 - Envisaging the Future of Cities"*, xvi.
20. UN Habitat, *"World Cities Report 2022 - Envisaging the Future of Cities"*, 24.
21. Mike Lydon, Anthony Garcia & Andres Duany, *Tactical Urbanism: Short-term Action for Long-term Change*, 2.
22. https://groundplaysf.org/, accessed in 24 May, 2023.
23. (Camara et al, 2018). https://drive.google.com/file/d/1sVnmzokPm_xIf7-Pk1m9ptm3s9nTnNfW/view,
24. Gehl Annual Report 2021-22. https://issuu.com/gehlarchitects/docs/master_gehl_annual_report_2022, accessed in 23 May
25. A package of policy initiatives which aim to help the European continent reach green transition and climate neutrality by 2050.
26. New European Bauhaus: https://new-european-bauhaus.europa.eu/about/neb-lab_en, access in 29 August 2023.
27. An understanding that the global changes, human activities, and all other species are interconnected.
28. Pope Francis. *Carta Encíclica Laudato Si': Sobre o Cuidado da Casa Comum*. Vaticano: 2015.
29. Beatley, Timothy, *Biophilic cities: integrating nature into urban design and planning.*
30. UN Habitat, *"World Cities Report 2022 - Envisaging the Future of Cities"*, 180.
31. Moreno, Carlos, *Droit de Cité: de la ' ville-monde ' à la ' ville du quart-d'heure '*. L'Observatoire, 2020 : 124-125.
32. idem. p 128.
33. UN Habitat, *"World Cities Report 2022 - Envisaging the Future of Cities"*,188.
34. Coined originally in the 2012 Global Workforce Study, by Tower Watson, on the quest for greater employee engagement and performance in the workplace.

Image Captions

Fig 1. Left. Stockholm (1972) word cloud. Right. Rio (1992) word cloud.
Fig 2. Left. Johannesburg (2002) word cloud (top) and Sharm El Sheik (2022) word cloud (bottom). Right. Doha (2012) word cloud (top) and 20 most recurring words in the 5 reports word cloud (bottom).
Fig 3. UN Habitat "Envisaging the future of cities" word cloud. *Words include other variants.
Fig 4. Schema of the 'sustainable development' narrative evolution, considering the priority attributed to the concept's pillars (social, environmental, and social). Schema designed by the authors.
Fig 5. Schema of the Sustainable Urban Engagement concept: in search of a sustainable praxis. Schema designed by the authors.

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Biography

Clarissa Duarte Architect and Urban Planner from UFPE (2002); Master in Urban Planning and Space Dynamics from Paris 1-Sorbonne University (2005) and PhD student in Sustainable Architecture and Urbanism from Université de Toulouse-FR (2020). Professor of the Architecture and Urbanism course at UNICAP (www.unicap.br) since 2006 and researcher at the humaniLAB Laboratory, developing research related to the Planning and Design of Public Spaces, with a focus on streets and its relationship with architecture. Living in Paris between 2003 and 2005, she collaborated in the office of award-winning architect Christian de Portzamparc and in the AREP Agency. She currently lives in the city of Toulouse, France, where she develops a PhD research at the Laboratory for Research in Architecture (LRA/ENSAT) and is part of the research team at ICAM-Toulouse. Her current research studies the streets' benefits on the socio-environmental health of contemporary cities and its contribution to the socio-ecological transition.
Mariana Magalhães Costa Architect and Urban Planner from Pontifícia Universidade Católica de Rio de Janeiro (PUC-RIO), Brazil (2010). Through an exchange programme, she also studied one semester at the Faculdade de Arquitetura da Universidade Técnica de Lisboa (FAUTL), Portugal. She won first prize at the São Paulo Biannual student architecture competition, in 2009, with a team project for the city's public parks. Between 2011 and 2016, she worked in architecture firms (both in Paris and Rio) in projects related to the Rio 2016 Olympic Games. Mariana has an MBA in entrepreneurship from FGV-Rio (2014) and a MSc. in Urban and Environmental Engineering through PUC-RIO in partnership with Technische Universität Braunschweig, Germany (2016). Currently, she is a PhD candidate at the Laboratoire de Recherche en Architecture (LRA) at l'École Supérieure d'Architecture de Toulouse (ENSAT), Université Jean Jaurès (UT2J), France. Her research analyses the impact of megaevents on cities, in particular the case of Paris 2024.

The promise(s) of sustainability

Fardin, J. Igor[1]; Peragine, Richard Lee[2]
1. Politecnico di Torino, Dipartimento Interateneo di Scienze, Progetto e Politiche del Territorio, DIST, Torino, Italy
2. Politecnico di Torino, Dipartimento Interateneo di Scienze, Progetto e Politiche del Territorio, DIST, Torino, Italy

Abstract

The discourse on sustainability, today in the spotlight of architectural debate and practice, is grounded on the promise of a sustainable relationship between humans and nature through architecture. In this sense, sustainability is the latest expression of architecture's attempt to articulate the human/nature divide. The continuity between current debate on sustainability and previous ecological discourses on the human/nature relationship is not frictionless. Yet, despite historical ruptures, there is something that keeps these different discourses together—they are all promises.

Against the background of the New European Bauhaus's promise of sustainability, we will read literary works of Western architects Walter Gropius, Richard Buckminster Fuller and Richard Rogers, in order to expose both the ruptures between their different promises regarding the human/nature relationship and the continuity represented by the promise itself in language. This is of course not specific to the language of architecture alone; as philosopher Jacques Derrida noted: "Each time I open my mouth, each time I speak or write, I promise". Yet, architectural language reveals the intimate connection between language and promise, because of how it introduces the reader to the specific temporality of a time to come and its future realization through the project.

Since all language is promise, there can be no architectural language free of promises. Starting from this claim, this contribution aims at critically addressing the limits of the promise-as-project through which architecture has, and is, addressing the relationship between humans and nature, as well as—given the urgency of rethinking this divide—suggesting the possibility of a different form of promise. We set out to think of the promise not as a project directed towards a specific future but one that promises here and now. A promise that is valid in itself and not in its future realization.

Key words: promise, language, sustainability, project, future.

1. Introduction

The word "sustainable", next to "beautiful" and "together", was recently added to the long list of keywords guiding the aim of the New European Bauhaus to "connect the European Green Deal with our living spaces and experiences"[1]. The extensive use of keywords within this project brings to the fore the role language plays in giving spatial forms to a specific agenda. In the case of the New European Bauhaus this agenda is the European Green Deal: a set of policies that promise the possibility of reducing emissions, decoupling economic growth from the use of resources and leaving "no person and no place left behind"[2]. It is within this framework that the keyword "sustainable" is used to promote "places, practices and experiences" that are sustainable insofar as they are "in harmony with nature, the environment, and our planet"[3]. In other words, the word sustainable is mobilized to promise a harmonic articulation of the human/nature divide through "positive transformation"[4] of the environment.

While undoubtedly a worthy cause, a closer look at this promise of harmonic future relations between humans and nature through positive transformation sheds light on a series of presuppositions on which this promise rests and that need to be addressed. What this promise presupposes is the neutrality of technological development, the central role that architecture and planning can play within this process and the possibility of leaving no one and no place behind within capitalism. As Ajl, among others, has observed, this position, given for granted within many different Green New Deals, raises questions that cannot simply be glossed over.[5] It is in order to shed light on the specific ethical and political presuppositions of the often-sanitized language of architecture and planning that we propose to understand sustainability as a promise. In this sense, we claim that the keyword "sustainable" cannot be reduced to a technical or economical word. It is a *promise*, "an ethical act *par excellence*"[6] that articulates in specific ways the human/nature divide.

In what follows, we will apply this perspective to study three architectural and planning texts that, during twentieth-century Western architecture and planning, attempted to articulate in different and yet related ways the relation between humans and nature, and, in this sense, promised a harmonious—now called sustainable—future. This study will thus move from promise(s) of, as it were, sustainability *before sustainability* in Water Gropius' *Scope of Total Architecture* (1943) and Richard Buckminster Fuller's *Operating Manual for Spaceship Earth* (1969)—works in which the promise of harmonically bridging the human/nature divide does not rely on the term sustainability—up to Richard Rogers' *Cities for a Small Planet* (1997) in which the word sustainability actually becomes central. This attention to the language of architecture and its promise(s) of sustainability will allow us to bring to the fore the ethical and political implications of these works, the presuppositions on which they are grounded and the fact that they—as today's Green New Deal—are not simply architectural and planning solutions to problems, but rather promise(s) of sustainability.

What's more, reading these different authors against the background of the New European Bauhaus' use of the term "sustainable" briefly sketched above will allow us to trace a series of ruptures and continuities within the different promise(s) of sustainability in Western twentieth-century architecture. In this sense, these promise(s) emerge as specific articulations of the promise-as-project logic inherent to architectural and planning practices. A logic that, we believe, should be exposed for its political and ethical implications, in order to venture into the possibility of proposing another kind of promise of sustainability. To this end, drawing on a short contribution to the notion of promise from philosopher Jean-Luc Nancy[7], we conclude our contribution by positing the possibility of a different articulation between architectural project and promise with regard to the human/nature divide, one that has ethical and political value in itself rather than for what it makes us wait for.

2. Articulating the Human/Nature Divide: Gropius, Fuller and Rogers

Historians Peder Anker[8] and Oliver Botar[9] have already argued that reflections on the relations between humans and their environment were already present within the Bauhaus school—a foundational moment of modern Western architecture which the New European Bauhaus is evidently harking back to. Influenced by biological thought, teachers and exponents of the Bauhaus developed what Botar and Anker named *biofunctionalism* or *biocentrism*: a shared belief in "functional utility found in biological organisms and complex systems"[10]. This biological understanding of the architectural and artistic practice rested on a bond between Romanticism and modern science[11] which promised the possibility of an organic unity between human and nature. This promise of unity emerges in interesting terms in Walter Gropius' thought during his time at Harvard (1937-1952), a time in which "the environmental agenda was central" to his work.[12] Part of Gropius' teaching and writings of the period ended up in a book emblematically titled *Scope of Total Architecture*, where he articulates the possibility of recovering a unity that he thought to be lost in the disorder and chaos of his times. This dimension of a lost unity emerges when Gropius writes:

> "We all still have before our mind that unity of environment and spirit that prevailed in the horse and buggy time. We sense that our own period has lost that unity, that

the sickness of our present chaotic environment, its often pitiful ugliness and disorder have resulted from our failure to put basic human needs above economical and industrial requirements."[13]

In Gropius the nostalgia for a unity between "environment and spirit" that has then been lost because of "our failure" to focus on "basic human needs", is paired with the promise of a *total architecture* that allows for the possibility of a "reunification" to come, one in which "the planner and architect will have to play a big role".[14] Gropius' humanist *total architecture* is therefore not simply a return to nature: it suggests the possibility for a future community that, through technological development, would be re-centered around "basic human needs". As Gropius notes: "In our mechanized society we should passionately emphasize that we are still a world of men [*sic*.], that man [*sic*.] in his natural environment must be the focus of all planning".[15]

The objects of Gropius' architecture are therefore humans and their "natural environment", and the promise it delivers offers a possible articulation of the two through planning. Therefore, it follows that architects and planners play a crucial role in this promise. Further in the book, they are defined as the "*responsible* guardian[s] for our most precious possession, our natural habitat".[16]

The ethical notion of responsibility runs across Gropius' book. Not only must architects bear the "responsibility of leading the way"[17]: it is also high time citizens developed "individual responsibility"[18]. What's more, for Gropius, the most important ethical task of the architect and the planner, their "greatest responsibility", concerned "the protection and development of our habitat".[19] The couple "protection and development" makes clear what is at stake in Gropius articulation of the human/nature divide, in his promise of sustainability. Gropius's promise is one of a humanist reunification of nature and humans that architects and planners could achieve through a developmental practice informed by their comprehensive vision of what a future community might look like. As Gropius writes in the last paragraph of the book:

> "I have come to the conclusion that an architect or planner worth the name must have a very broad and comprehensive vision indeed to achieve a true synthesis of a future community. This we might call 'total architecture'."[20]

Over two decades after the first publication of *Scope of Total Architecture*, Richard Buckminster Fuller's *Operating Manual for Spaceship Earth*—a book heavily influenced by scientific innovation and the looming threat of Armageddon during the Cold War—also came with a promise of sustainability. Lydia Kallipoliti argues that Fuller was one among a number of pioneering ecological thinkers who saw "design as a tool of systemic management to address social equity' at the scale of the totality of the Earth".[21] Radicalizing Gropius' thought, what Fuller promised was not a responsible reunification of humans with their environment. The human/nature divide was rather articulated by promising to humanity a fully controllable Nature—an "Earth-object"[22]—whereby the threat of nuclear fallout and human extinction on a finite, and fully destructible, Earth could be avoided by "[c]oping with the totality of Spaceship Earth and universe".[23]

In *Operating Manual for Spaceship Earth*, with a language that betrays his naval and military interests, Fuller exposes what could be now seen as an apology of geo-constructivism, or geo-engineering—the solution-oriented technocratic thinking currently embraced by the discourse on sustainable architecture and planning. This perspective makes way for Fuller's planetary claims and teleological ethics, according to which all forms of existence move and are moved by "the generalized principles governing universe"[24] toward a final ordering good—something possibly influenced by Fuller's unorthodox religious beliefs. For Fuller, in fact, the Earth is a spaceship: "a mechanical vehicle, just as is an automobile"[25], which the human race was bestowed upon and must look after, in order to avoid (nuclear) extinction. In Fuller's words:

> "Spaceship Earth was so extraordinarily well invented and designed that to our knowledge humans have been on board it for two million years not even knowing that they were on board a ship. […] We have not been seeing our Spaceship Earth as an integrally-designed machine which to be persistently successful must be comprehended and serviced in total."[26]

If for Gropius, the articulation of the human/nature divide pertained to the scale of architecture and the city, Fuller's object of design has become the whole planet. Fuller argues humanity must take up the task of Earth-stewardship, fully understanding and tending to such superb design—"comprehended and serviced *in total*"—rather than abusing and misusing it. Moreover, Fuller continues, Spaceship Earth came with no instruction manual: we must thus follow the "total scheme of nature"[27], finally relinquishing "the ground rules of yesterday's superstitious and erroneously conditioned reflexes".[28]

Planners, in this scheme, are the preferred salvific figure (even to architects), in light of the comprehensive thinking of their training. Fuller, in fact, calls for a design approach that departs from the largest system possible (i.e., general systems theory), hence in terms of the universe and, from there, subdivides the system progressively into smaller parts, each time getting rid of what is irrelevant. General systems theory reveals Fuller's conceptualization of nature as "always employ[ing] only the most economical realizations"[29]—something which would then inform "the most economical manner" to devise his famous geodesic designs.[30] It is thus Nature—with a capital N—or the universe, as a holistic machine, which instructs Man's design and his planning efforts on (Spaceship) Earth. Yet, Fuller's appeal for the economy of nature's design conceals a form of human exceptionalism:

> "What is really unique about man [*sic*.] is the magnitude to which he has detached, deployed, amplified, and made more incisive all of his many organic functionings. […] Man [*sic*.] externalizes, separates out, and increases each of his specialized function capabilities by inventing tools as soon as he discovers the need through oft-repeated experiences with unfriendly environmental challenges."[31]

Technology, in other words, gives us the tools to enhance the organic capabilities of Man toward the penetration of hostile environments. Fuller's promise articulates the human/nature divide by granting technology the possibility of fully replacing and remaking nature, while considering it a source of inspiration. Nature, via technology, becomes non-existent: a form of anaturalism which subtends this pioneering example of geo-constructivism's promise to save humanity from extinction. Referring to contemporary environmental planning, in fact, Frédéric Neyrat claims that "the fundamental promise of geo-constructivism is not progress […] but the mere survival of humanity: From now on, progress is a secondary benefit of a planetary lifesaving program."[32] Neyrat himself traces the stakes of geo-constructivism back to Fuller's promise of preventing "humanity's otherwise fatal nosedive into oblivion"[33] by making:

> "our space vehicle Earth a successful man [*sic*.] operation. We may now raise our sights, in fact must raise our sights, to take the initiative in planning the world-around industrial retooling revolution. I now see the Earth realistically as a sphere and think of it as a spaceship. It is big, but it is comprehensible."[34]

Ultimately, Fuller promises salvation by pushing humanity to overcome its short-sightedness and to "resolve", through a technologically-informed design, the bipolar politico-ideological threats of the Cold War, as much as nature's unpredictability. For this reason, in the closing sections of the book, Fuller awards to planners, architects and engineers a salvific role, encouraging them to "take the initiative" and embrace the task of "bringing all of humanity in for a happy landing".[35] It is "the infinitely accommodative laws of the intellectual integrity governing universe"[36] which give humanity the opportunity to control Spaceship Earth and save humanity from extinction. Fuller's "operating manual" is a promise of salvation through civilizational geo-engineering, imbued with teleological tones of hope for humanity's mission in the universe and the endowment of technology—above all, the computer—in which the Earth becomes the object of design. Fuller's ethical subject is therefore humanity as a whole; one subjected to "larger evolutionary patternings [which] transpir[e] transcendentally to any of man's conscious planning or contriving"[37], making us part of a law of the universe that, through technology, will eventually lead to humanity's "total success and readiness".[38]

As Anker notes, Fuller claimed politics to be obsolete, thus ideally giving way to a form of enlightened design, free of "the debilitating, often lethal biases of politics".[39] In this sense, denuded of Gropius' discourse on community, and negating a role to politics via technology, Fuller's discourse anticipates the apolitical tones of today's geo-constructivism, as much as those of the discourse on sustainability supporting it. Yet, despite these similarities between Fuller and the contemporary discourse of sustainability, it is important to note that in Fuller, as in Gropius, the human/nature divide was articulated without any reference to the word sustainability. It is only later in the twentieth century that this term would assume its place—now omnipresent—in architectural discourse regarding our relationship to the environment. An early use of this term within the orthodox architectural debate can be found in Richard Rogers' pioneering *Cities for a Small Planet*. In this book, Rogers writes:

> "the worldwide environmental and social crisis of our cities has focused minds. The call for sustainability has revived the need for considered urban planning and has demanded a rethink of its basic principles and objectives. The crisis of modern civilisation demands that governments plan for sustainable cities."[40]

Situating itself within "the call for sustainability" and its capacity of "focusing minds" in the 1990s, Rorgers' *Cities for a Small Planet* argued that cities would have become—as of 1997, but we can say

this narrative lives on almost 30 years later—the prime location for "safeguarding our future" and "restoring humanity's harmony with its environment".[41] The word sustainability, in Rogers' text, becomes a means to plan cities so as to "harmonise society and humanise its cities".[42] As he writes:

"Ecologists' description of our relationship with nature—we are not its owners but its *trustees*, and have responsibilities towards future generations—applies just as well to the public life of cities."[43]

Rogers calls on planners and architects to relate to cities in the way ecologists describe our relationship to nature—a relation in which we do not own nature but rather are its "trustees". Differently from Fuller's geo-constructivism, Rogers' stewardship *qua* management is moved by a civilising intent predicated on the liberal discourse of human rights, democracy and peace. The latter is in turn grounded on the global political arrangement of the time, characterized by the breakthrough of scientific consensus around ecological and environmental management in the 1980s[44]; the ascent of the Internet; the rise of supranational organisations after the fall of socialism, as well as the humanitarian military interventionism—the "just" wars—by the Eurowestern world that ensued.
In this regard, a clear difference emerges between Rogers' promise of sustainability and both Gropius' promise of a humanist *total architecture*, and Fuller's promise of Earth stewardship. This becomes evident when Rogers writes that "[t]he core of this concept of sustainability is the redefining of wealth to include natural capital".[45] Rogers is not promising to steward society elsewhere: he is promising the possibility of articulating the human/nature divide by integrating nature within the structure and logics of capital. For Rogers sustainability is about "securing quality of life by establishing the value of goods held in common".[46] This promise of environmental sustainability revolves around two elements: the creation of "thriving" and "vibrant" public spaces, "conceived as multifunctional" and "designed for a variety of uses in which everyone can participate"[47]; and a fairer distribution of resources between "the rich" and "the poor" through technology.[48]
For Rogers the presence of what he defines as "open-minded public spaces" is crucial both to the well-being of citizens in future cities and to guarantee active participation in city life—a central aspect of his notion of sustainability. Indeed, echoing Gropius' notion of responsibility, Rogers' sustainability cannot but relate to a specific ethical condition: "the shared responsibility for one's environment", that is, citizenship, and so, relatedly to the city, participation and a sense of belonging to the place one inhabits.[49] Rogers, drawing on European and North American examples, promises public spaces capable of turning the "energy-guzzling environment that isolates people from nature"[50] in cities into "open-minded", "inspiring", "cultured", "balanced" and "democratic" urban environments. Compared to Gropius' and Fuller's texts, Rogers' conceptualisation of sustainability decidedly embodies a liberal discourse, one sanitized and purged to the extent where the argument of rights and democracy becomes part and parcel of the logic of capital through the notion of "sustainable development".
The second aspect informing Rogers' promise of sustainability concerns a fairer distribution of resources and wealth. This promise is one made by the developed world to the underdeveloped world. As Rogers puts it:

"Sustainability is about finding more socially cohesive, economically efficient and ecologically sound ways of producing and distributing existing resources. […]. The planet is perfectly capable of sustaining all humanity if we respect the demands of nature and focus on our use of technology."[51]

Sustainability emerges in Rogers—as in other "focused minds" of the period—as the promise of articulating the human/nature divide within the capitalist system of production and its logic thanks to technology. Rogers promises the possibility of "working our buildings into the cycle of nature"[52] without breaching the planet's limits. In so doing, he is capable of (re)giving a central role to architecture and its technological specificities as long as it "minimise[s] its confrontation with nature" by "respect[ing] nature's laws" through the use of renewable energies.[53] Like Gropius' and Fuller's humanism and anaturalism, Rogers' promise of sustainability articulates the human/nature divide by supposedly managing, and effectively neutralizing, the latter, while "return[ing] architecture to its very roots".[54] Rogers' promise of sustainability, by saving the planet, saves architecture:

"Our present need for sustainable building now offers opportunities to re-establish ambition and to evolve new aesthetic orders—it could provide the impetus for the revival of the profession of architecture."[55]

3. Another Kind of Promise
This brief analysis shows a series of ruptures, influenced by historical conjunctures, but also underlying continuities in how the human/nature divide has been articulated by central figures of the

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Western architectural canon. Inspired by the biological sciences of his time and by changes concerning the modes of production and consumption, Gropius' humanist thought promised a humanist and harmonic future guided by a *total architecture*, envisioned at the scale of the city, that would put human beings at the center of the world. This perspective is radically different from Fuller's promise of the Earth as a planned totality. The images of the earth as a whole, made available by space exploration and aeronautics, introduced the possibility of making the Earth the object of a project of architecture, or rather, of planning. Within this context, Fuller radicalized Gropius' humanism and vision of totality, and promised to articulate the human/nature divide in favor of humanity's total control of nature. While Gropius' human beings can both control and produce their own environment, they still seem, to a certain extent, immersed in it. In Fuller's promise this disappears, and humans, thanks to the captains' "comprehensive thinking", can take control of the whole Earth as if it were a spaceship. Rogers' promise of sustainability offers yet another way of articulating the human/nature divide. Rogers promises a form of environmental management *qua* stewardship in which nature, managed by its human trustees, is fully incorporated into the logics of capital and the liberal discourse on rights and democracy. Moreover, Rogers' main spatial scale of reference is not that of the Earth as in Fuller, but of the building and the city—although he is clearly aware of the interconnected planetary implications of architecture and urbanism. In this regard, Rogers' text seems to operate a sort of synthesis between Gropius' humanist total architecture—left out of the text—and Fuller's anaturalist, geo-constructivist Spaceship Earth—which is quoted in more than on one occasion.
Yet, as noted above, despite such differences, there are also continuities between these promise(s). A first aspect is their ambition to totality. These architectural promise(s) present us with a whole: the whole human in Gropius, the whole Earth in Fuller and the interconnected whole of Rogers' cities and redistribution—a totality at work also in the New European Bauhaus promise of leaving "no place and no person left behind". A second trait of continuity lies in their unshakable faith in development and technology. The three promise(s) are in fact all relying on the capacity of technology to articulate the human/nature divide for future societies—something that also emerges in the New European Bauhaus' ambition to provide "positive transformations". A third shared aspect is the almost salvific role that architects and planners acquire in these promise(s). They are the subjects that, through the project, are called to actualize the promise in the future. A fourth shared aspect of these promise(s) is the humanism or anaturalism—two sides of the same coin as Neyrat argues[56]—which subtends, in different forms, all three projects—something that is still present, more subtly, in the New European Bauhaus "beautiful" environmentalism "for our eyes, minds, and souls".[57] Finally, the last relevant trait of continuity lies in how the call to responsibility is addressed to educated citizens and architects by Gropius; to an "inspired" humanity and to planners by Fuller; to "developed" and "creative" communities, as well as environmental architects by Rogers; or to European "citizens, experts, businesses, and institutions"[58] by the New European Bauhaus. It is therefore undeniable that, in disclosing a project for a life together in the future, sustainability is a promise and, as such, an ethical act. Yet, what we find particularly interesting is not that sustainability must be framed within an ethical dimension, but the specific ethics that can be observed in the use of language deployed by these literary works: one that relies on education, community and a humanistic—and hyperbolically totalizing—relation to nature.
These traits of continuity seem to reflect the ambiguity that, following Jean-Luc Nancy, is proper to the ethical act of the promise. Indeed, for Nancy, the promise that the Western world has made to itself in order to overcome its contingency has been constantly stretched between a realized promise and a hyperbolic one.[59] On the one hand, the promise must open the self onto infinity—a word [*parole*] that promises a hyperbolic absolute; a promise yet to be realized, if not impossible—and, on the other, this very promise also defines the form of this infinite—a word that is fertile in itself [*fécondité d'elle-même*]; a promise of something possible or already realized. This ambiguity is contained in what we have named in the introduction as the logic of the promise-as-project at work in Gropius', Fuller's and Rogers' promise(s). All three are stretched between a hyperbolic totality and the constant necessity of giving the impression of controlling this totality via the architectural project. As philosopher Jacques Derrida noted regarding the promise in language: "Each time I open my mouth, each time I speak or write, I promise".[60] This dimension, proper to language, is particularly evident within architectural language, since, through the project, it needs to introduce the reader to the specific temporality of a time to come and its future realization. This ambiguity emerges in how Rogers' promise of sustainability needs to constantly reference existing examples of the future he is promising, conflating different temporalities and geographies into a single system of equivalences. This specific way of promising seems to conflate the two poles of the promise posited by Nancy, opening onto a dimension in which "the destiny of the promise is achieved and blurred"[61], in the name of a general equivalence, that is, in the name of capital. In this aspect, Rogers' promise seems to achieve and blur the ambiguity present within the logic of the promise-as-project also shared by his predecessors, and forces us to ask, with Nancy:

"But is the project not a forgetting, if not a betrayal, of the promise, in a humanity
that we have to admit exceeds disproportionately all sense and all truth? Should
we be allowed to promise tomorrows? Paradises? Or should we, on the contrary,
renounce every kind of promise?"[62]

So, is the project not the forgetting, if not betrayal, of the promise, or rather the failure to keep it? At
that point, should we not abandon all promises? Given the fact that the structure of the promise of
something to come is part and parcel of the architectural project, we think that it would be impossible
for the discipline to completely abandon promises. Yet, it still might be possible to articulate the
relation between the promise and the project differently, in particular, with regard to the urgent topic of
sustainability and the relationship between humans and nature. Indeed, Nancy himself opens onto
another possibility and concludes his essay by asking:

"Or should we learn a promise that promises here and now, before all deadlines,
the possibility of a bit of sense and truth? A promise capable of having value in
itself and not for what it would make us wait for?"[63]

Of course, our aim is not to provide an answer to this somewhat rhetorical question but to use it as a
motor for thought. What might an architectural promise of sustainability that promises *here and now,*
and that has value in itself, consist in? How can we think of something other than the (impossible)
future realization inherent to the promise-as-project? Or, something other than a humanist return to
nature (a form of nostalgia), geo-constructivism (a form of futurism) or environmental management (a
form of presentism)?
The etymology of the word sustainability comes to our assistance. The English term "sustainability"
comes from the Latin transitive verb "*sustĭnēre*", from "*sub-*", under or up-from-below, and "*tenere*", to
hold. In this sense, sustainability would indicate something that provides, supports and assists, as
much as something which bears, suffers and endures.[64] A promise of sustainability that engages with
this etymology would therefore bring to the fore a specific temporality—a duration or reiteration of
endurance that is neither the projection of a harmonious hyperbolic future nor a manageable relation
to nature in the present. Rather, it would present us with a here and now that cannot be managed but
only endured through a relation to nature as something *other*, something that we can bear and assist
but not manage or control, something that is therefore exceeding our present. Within this frame, it
follows that a promise of sustainability is a modest one. This is not an ethical retreat, but "the
possibility of a bit of sense and truth" in the here and now, and, thus, a promise still worth preserving.
It is not a coincidence that the urgency of articulating the human/nature divide in the 19th century has
paved the way for and been challenged by other promise(s) of sustainability in more recent
architectural attempts to rethink our relationship with nature. Unfortunately, some of these attempts,
while questioning technocratic geo-engineering solutionism, often fall in the trap of a humanist
framework that still flattens nature onto human categories. Mindful of this risk, we align to Fréderic
Neyrat's proposition for a political ecology that—beyond both the Earth-object of geo-constructivism
and the Earth-subject of eco-constructivism and deep ecology[65]—is capable of thinking that
uncontrollable part of nature, which, we claim, escapes the logics of the project. From this perspective,
we propose the possibility of another promise-as-project of sustainability: a promise that begins with
the recognition of nature's uncontrollable character and addresses the possibilities to endure and
sustain it here and now, through the project.

Notes

1 "beautiful | sustainable | together", European Commission, accessed 22nd May 2023, https://europa.eu/new-european-bauhaus/index_en.
2 "A European Green Deal", European Commission, accessed 22nd May 2023, https://commission.europa.eu/strategy-and-policy/priorities-2019-2024/european-green-deal_en.
3 European Commission, "beautiful | sustainable | together."
4 Ibid, https://new-european-bauhaus.europa.eu/get-inspired/inspiring-projects-and-ideas_en.
5 Max Ajl, *A People's Green New Deal* (London: Pluto Press, 2021).
6 Jean Birnbaum, "Seule la promesse nous fait tenir," in: *Qui tient promesse?*, ed. Jean Birnbaum (Paris: Éditions Gallimard, 2015), 9.
7 Jean-Luc Nancy,"La vérité de parole," in: *Qui tient promesse?*, ed. Jean Birnbaum (Paris: Éditions Gallimard, 2015), 11-15.
8 Peder Anker, *From Bauhaus to Ecohouse: a History of Ecological Design* (Baton Rouge: Louisiana State University Press, 2010).
9 Oliver Botar, "The Biocentric Bauhaus" in: *Routledge companion to biology in art and architecture*, ed. Charissa Terranova and Meredith Tromble (London: Routledge, 2017), chapter 1.
10 Lydia Kallipoliti, "History of Ecological Design," in: *Oxford Research Encyclopedia of Environmental Science,* ed. Herman Hank Shugart (Oxford: Oxford University Press, 2018).
11 Ibid.
12 Anker, *From Bauhaus to Ecohouse,* 37.
13 Walter Gropius, *Scope of Total Architecture* (New York and Evanston: Harper and Row Publishers, 1955), 76-77, emphasis in original.
14 Ibid., 172.
15 Ibid.
16 Ibid., 184, emphasis added.
17 Ibid., 95.
18 Ibid., 177.
19 Ibid., 183.
20 Ibid., 185.
21 Kallipoliti, "History of Ecological Design."
22 Frédéric Neyrat, *The Unconstructable Earth. An Ecology of Separation* (New York: Fordham University Press, 2019).
23 Richard Buckminster Fuller, *Operating Manual For Spaceship Earth* (New York: Southern Illinois University Press,1969), 44.
24 Ibid., 59.
25 Ibid., 52.
26 Ibid., 50-52.
27 Ibid., 13.
28 Ibid., 59.
29 Ibid., 67.
30 Ibid.
31 Ibid., 113.
32 Neyrat, *The Unconstructable Earth*, 4.
33 Fuller, *Operating Manual*, 128.
34 Ibid., 130-131.
35 Ibid., 133.
36 Ibid.
37 Ibid., 45.
38 Ibid., 54-55.
39 Fuller in Anker, *From Bauhaus to Ecohouse*, 80.
40 Richard Rogers, *Cities for a Small Planet* (London: Faber and Faber, 1997), 168.
41 Ibid., 4.
42 Ibid., 8.
43 Ibid., 153, emphasis added.
44 Federico Luisetti, "Geopower: On the states of nature of late capitalism," *European Journal of Social Theory* 22, no.3 (2018): 342–363.
45 Rogers, *Cities*, 5.
46 Ibid., 169.
47 Ibid., 9.
48 Ibid., 172-175.
49 Ibid., 14.
50 Ibid., 88.
51 Ibid., 169.
52 Ibid., 101.
53 Ibid., 98.
54 Ibid., 101.
55 Ibid., 69.
56 Neyrat, *The Unconstructable Earth*.
57 European Commission, "beautiful | sustainable | together."
58 Ibid., https://new-european-bauhaus.europa.eu/about/about-initiative_en.
59 Nancy,"La vérité de parole," 14.
60 Jaques Derrida, *Monolingualism of the Other: or, the Prosthesis of Origin* (Stanford: Stanford University Press, 1998), 67.
61 Nancy, "La vérité de parole," 14. Our translation: "Le destin de la promesse s'accomplit et se brouille".
62 Ibid.,15. Our translation: "Mais le projet n'est-il pas oubli, sinon trahison, de la promesse, dans une huamnité dont il faut bien admettre qu'elle exceed démesurément tout sens et toute verité? Faut-il nous laisser promettre des lendemains? Des Paradis? Faut-il au contraire renoncer à toute espèce de promesse?".
63 Ibid. Our translation: "Ou devons-nous apprendre une promesse qui promette ici et maintenant, avant toute échéance, la possibilité d'un peu de sens ou de vérité? Une promesse capable de valoir pour elle-même et non pour ce qu'elle ferait attendre?".
64 "Sostenere," Enciclopedia Treccani, accessed 22nd May 2023, https://www.treccani.it/vocabolario/sostenere/.
65 Neyrat posits an "Earth- withdrawn, nonobjective and irreducible to a body, the Earth whose being eternally eludes its spherical aspect. This is the Earth governed by denaturing nature: the nocturnal side of nature." (2019, 168).

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Biography
J. Igor Fardin is a doctoral student at the Politecnico di Torino (Italy) in the program of Urban and Regional Development. After studying contemporary history in Milan and Paris and writing journalistic articles concerning spatial issues for years, he decided to start a PhD dedicated to the study of play as a specific form of spatial use that allows to uncover the radical potential of a series of spatial practices and figures like skateboarding and the practice of Italian designer and artist Ugo La Pietra. His interests include critical theory, contemporary philosophy and psychoanalysis as well as art, design and architecture history and theory.
Richard Lee Peragine is a trained architect and PhD candidate at the Dipartimento Interateneo di Scienze, Progetto e Politiche del Territorio (DIST) of the Politecnico di Torino, Italy. His doctoral work looks at the relationship between sovereignty and the notion of emptiness in the northwesternmost corner of Bosnia and Herzegovina, as a way to address the ethics of the project of architecture. His research interests include the intersections between architecture, political philosophy and critical theory. Before joining DIST, he studied at the Dipartimento di Architettura di Ferrara and at the Faculdade de Arquitetura da Universidade de Lisboa, and then worked in architectural studios in London, Bologna, Berlin and Brussels.

Critical Spatial Practices
Inhabiting an Ever-changing Term

Gotti, Francesca
Politecnico di Milano, DASTU, Milano, Italy, francescac.gotti@polimi.it

Abstract

In her 2006 publication, "Art and Architecture: a Place Between," Jane Rendell formally introduces the concept of Critical Spatial Practices (CSP), which encompasses projects operating at the intersection of theory and practice, the public and private spheres, and art and architecture. Rendell's definition encompasses both contemporary and historical projects and delves into discussions on space and place in cultural geography, dialectic techniques, and feminist spatial construction. Since Rendell's work, other practitioners and theorists have expanded upon this term. Markus Miessen, for instance, has dedicated an educational program at Frankfurt's Städelschule to CSP and, alongside Nikoalus Hirsch, developed a book series in 2011 that invites various guests to explore the ethical and political implications and conflicts within their practice. Prior to them, Helen Liggett and David C. Perry addressed the same topic in their 1995 book, which examined the relationship between urban practices and capitalist development. While Liggett and Perry's definition draws on political science, geography, and urban studies, their research carries equally important political implications.
Within the discourse on the politics of design, this paper aims to discuss the evolution of the term CSP by comparing its diverse definitions and the way the boundaries between disciplines are being blurred, or shifted.
The paper explores the potential to establish the term as a tool for architects that aim to critically challenge the protocols of their practice and their political responsibilities. It reflects on the development of interdisciplinary, hybrid, and activist approaches, distancing themselves from established norms while validating the necessity of their work.

Key words: Critical Spatial Practices, Politics, Recognition, Spatial Turn.

1. New Words for New Worlds

The discourse surrounding counter-practices and dissidence in architecture has ignited a vibrant debate since the 1960s. With the emergence of movements and influential figures advocating for a disruptive approach to established practices, new mediums and spheres of intervention have been explored. Towards the end of the 20th century, the imposition of the globalized market led to a rapid economic boom followed by subsequent political and economic crises. These events triggered a strong reaction among architectural practitioners, who began developing alternative and self-generated projects that challenge the established system.

During this same period, terms such as tactical urbanism, grassroots architecture, and DIY architecture emerged, alongside expressions like pop-up urbanism, urban acupuncture, and guerrilla urbanism. These terms have contributed to the ongoing discourse on spatial counter-practices that emerged in previous decades. However, it is important to note that they often reflect an informal perspective that may not always be precise. They are used to describe practices primarily based on spontaneous interventions, elevating the role of non-pedigreed designers and architects. These practices are developed by citizens leveraging local knowledge and social relationships to reclaim the "right to the city" and re-appropriate public spaces.[1]

Nevertheless, this category often includes practices that fall in-between the realms of spontaneity and mainstream. These practices are informed by professional knowledge and blur the boundaries between bottom-up and top-down approaches, they actively experiment with new modes of spatial production through interdisciplinary approaches.

Within the context of contemporary counter-practices, a new definition has emerged that pertains to professional practices with design and space at their core: critical spatial practices. This term, closely associated with design and art, emphasises a critical approach to professional practice and recognises the need to establish new modes of action and production. The epistemological debate, preceding the exploration of this new approach to the profession, focused on reimagining the context of intervention—the urban space—from a sociological perspective. This approach builds upon the interdisciplinary field of "spatial theory."

In their seminal book *Spatial Practices - Critical Explorations in Social/Spatial Theory*, published in 1995,[2] Helen Liggett and David C. Perry compile various essays that challenge the very notion of "social space." These essays question the spatiality of political, economic, and physical relationships that constitute cities, in the wake of the "spatial turn" occurred between the end of the 80s beginning of the 90s across all kinds of academic disciplines. The book is the first to openly connect the urban planning debate with the works of spatial scholars such as Michel De Certeau (*The Practice of Everyday Life*), Michel Foucault (*Discipline and Punish*), and Henry Lefebvre (*The Production of Space*). As stated in the book, Ligget and Perry's definition of "spatial practices" as "spatial patterns of everyday life" derives from Lefebvre's theory of space, and takes into account his notion of space as process where "spatial practices" are distinguished from, but related to, "representations of space" (professional practices) and "representational spaces" (symbolic meanings embodied in space).[3] The authors draw from De Certeau's perspective that privileges "everyday operations", to question how these are joined to "abstract modes of representation", thus promoting a self-critical approach for planners to take part into processes of space making without taking on an abstract existence.[4] Finally, Liggett and Perry's theory points out the role of power relations between actors in the production of space, building upon Foucault's concept for whom professional practices both exercise power and are objects of the exercise of power.[5] The contributors to the book span diverse fields such as Political Science, Politics of Racial Representation, Geography, Urban Planning, and Architecture. The book is founded on the assumption that interdisciplinary research and recognising the role of physical space in shaping, maintaining, and challenging social life are crucial in "enabling work in the in-between areas of a theoretical and practical world conditioned by deindustrialised urban markets".[6] The essays in the collection prompt research to consider new questions of action and representation, exploring topics such as the negation of the city as a coherent entity through physical design patterns, the relationship between the representation of urban problems and corresponding policies, and the racial urban politics embodied by cultural spaces. The collection originated in 1990 as the Albert A. Levin lecture series "Representing the City" at Cleveland State University.

Since then, the epistemological debate on spatial practices has expanded to include gender, intergenerational, racial, and environmental studies. This expansion is exemplified by research such as "Spatial Practices" (2006-2022), an interdisciplinary series in Cultural History, Geography, and Literature edited by Brill (Amsterdam).[7] The debate has also linked theoretical representations to tactical actions from the realms of activism, art, design, and architecture. This is where the term "critical" joins "spatial practices." "Critical spatial practices" is a broad term used to identify professional experiences that question both their contribution to the representation of social space and their own definition as practices.

The term "critical spatial practices" first emerged in the early 2000s, and since then, numerous scholars and practitioners have contributed different definitions, emphasising political engagement and the strong

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hybridisation of disciplines. Among the scholars who have extensively dedicated their research and practice to the debate on critical spatial practices, as well as promoting the work of practitioners falling under this umbrella, are Jane Rendell and Markus Miessen.

From the comparison of the definitions offered by the two scholars, emerges an intense negotiation of the term critical spatial practices, nourished by a wide spectrum of contributions, leaving with an open ended scenario of actions.

everyday				practices
	tactical		spatial	design
	social			design
	social			practice
	architectural			practice
	social	architectural		practice
		critical		thinking
		spatial		thinking
	social			turn
		historical		turn
	architectural	historical		turn
		critical		turn
		spatial		turn
		spatial	practices	
		critical	spatial	practices
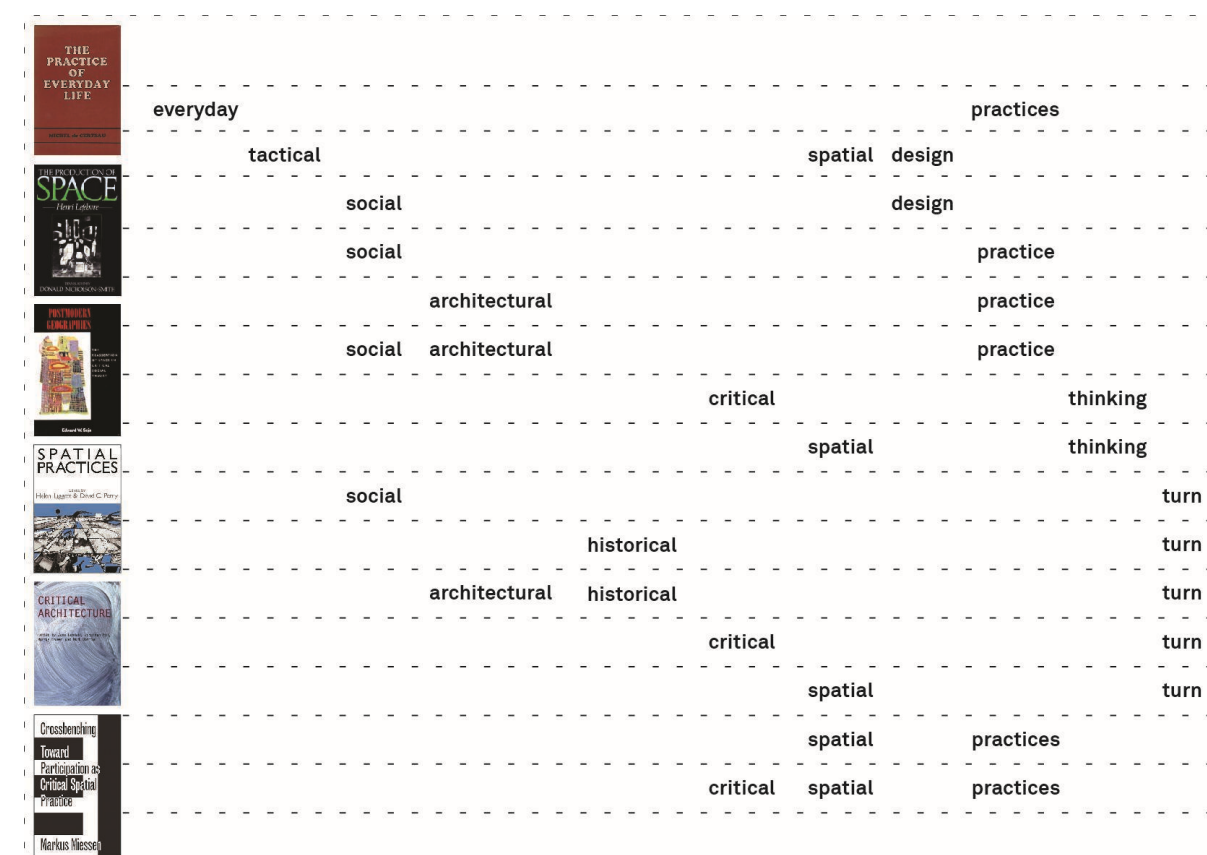
Fig. 1

2. Between Art and Architecture

The interdisciplinary realm of "spatial theory" has been enriched by multiple contributions from the fields of geography, anthropology, cultural studies, history, art, and architecture. In this context, Jane Rendell has particularly emphasised the relationship between art and architecture, with "between" serving as a key interpretive lens for understanding the discourse on spatial practices.

Jane Rendell, an architectural historian, cultural critic, and art writer, currently holds the position of Professor of Critical Spatial Practices at the Bartlett School of Architecture (UCL). Her work occupies a unique space that straddles art and architecture, theory and practice. This positioning is eloquently described in her book "Art and Architecture: A Place Between,"[8] which expands upon and reevaluates her earlier edited volume from 1999, titled "A Place Between."[9]

The contemporary practices examined in "Art and Architecture: A Place Between" are situated within the historical framework of minimalism, conceptual art, land art, and performance art movements of the 1960s and 1970s. These practices often demonstrate a profound engagement with architecture and public space, prioritising artistic expressions over strictly architectural ones. The research presented in the book offers architecture an opportunity for introspection, prompting reflection on its own operational modes. Rendell emphasises that architecture has traditionally lacked the ability to critically reflect on diverse theoretical approaches, their value, and their relationship with the objects they engage with, as well as the intricate dynamics between theory and practice. This architectural introspection is linked to Rendell's earlier work, particularly her book "InterSections: Architectural History and Critical Theory," co-edited with Iain Borden.[10] In that book, they explore the potential for self-reflective modes of thought within architectural practices.

Throughout her investigation, Rendell navigates projects that transcend their physical boundaries, encountering artists, architects, and collaborative groups involved in various critical endeavours ranging from performance art to urban design.[11] These endeavours engage with both the social and aesthetic realms while exploring the spatial aspects of interdisciplinary processes. Rendell's conceptual framework for defining critical spatial practices draws from the theoretical ideas of both Henry Lefebvre

and Edward Soja. From Lefebvre's "Production of Space", Rendell borrows the interpretation of one of the key problems with studies of space: the fact that these studies usually understand the social and the spatial field in a one-way relationship, rather than adopting the idea that space has an equal impact on the social, that the organisation of space expresses social relationship while reacting back. Drawing from Lefebvre's socio-spatial dialectic, Soja formulates a trialectical thinking introducing in this relationship the dimension of time.[12] Building upon Soja's triad, Rendell organises the investigated practices into three distinct categories.

Exploring practices that challenge the spatial dimension, Rendell highlights the contributions of art critics such as Nick Kaye, Alex Coles, Miwon Kwon, James Clifford, and Rosalind Krauss, who curate practices primarily developed by artists outside the confines of traditional gallery spaces. In this section, Rendell lists artists whose practice often encompass the concept of the 'non-site' and frequently appear in 'off-site' programs, transforming places into "spaces of social critique".[13] To mention one, Rendell recalls the art-piece "A-Z Cellular Compartment Units" (2001) by Andrea Zittel: the artist built a living unit inside a warehouse soon to be demolished (to leave space for luxury residential blocks), in Birmingham, commissioned by Ikon Gallery, briefly inhabiting it and later opening it to the public. The artwork did not point at mimicking an actual living unit but it rather aimed at questioning the need for living space, and the difficulties of sharing accommodation.[14]

From the architectural realm, Rendell mentions projects by designers who embody a critical approach to architecture through their innovative use of resources, materials, exploration of atmospheric processes, and deconstruction of architectural space; nevertheless, she questions the ambiguity of the relationship between their theoretical and practical projects and examines the extent to which their work can genuinely be considered critical.[15] As a positive example, she reports the firm Décosterd&Rahm: their approach seeks to deconstruct the spatiality of architecture by creating atmospheres that trigger biological processes, focusing on "physiological responses of the occupants in the programming of the space". Their critical approach lies in the paradoxical attitude of producing a functionalist aesthetic while negating any material pleasure, promoting senses and perception over material presence.[16]

In terms of the temporality, Rendell draws on Walter Benjamin's perspectives on history, allegory, and montage: she identifies those artistic practices that align with his theories, and that emphasise the ability of artworks to interrupt established historical narratives.[17] One of the cited practitioner of this category, is Anya Gallaccio: not only the artist experiments with the non-site, exhibiting in former factories and in the open landscape, but she explores the ephemeral and transformative dimension of materials and objects, thus triggering in the viewer the perception of time and transition. With "Two Sisters" (1998) Gallaccio intervened in Minerva Basin, Hull, by placing a column of chalk quarried locally, that was gradually eroded over five months by the waves and tides, offering a reflection on the erosion of the coastline.[18]

From the architectural field, Rendell cites examples of critical interventions as they explore notions of duration, emptiness, transience, and incompleteness.[19] Lacaton & Vassal are among the most representative practices: analysing their work for the Palais de Tokyo (1999), Rendell outlines a dual approach to time, expressed by the treatment of the ruin and by the interaction with transient uses. On one hand, the architects emphasise the effect of time on the building rather than hiding it, and on the other they produce a space that welcomes metamorphosis defined by how people move around it.[20]

In terms of social interactions, Rendell reflects on the challenges posed by commissioned public art referencing the work of critics such as Judith Butler, by participatory projects defined by Joseph Beuys' concept of "social sculpture", and by nomadic projects drawing on Rosi Baidottii's concept of "nomadic subject". This group emphasises the dialogic and relational value of art and architecture, focusing on the collaborations between architects and artists, and the complementary nature of ethical and aesthetic aspects of interventions, collecting examples of works that aim at empowering users.[21] Initiatives that seek to connect artists and architects seem to be superficial fallacious, and Rendell on the contrary tends to promote in her discourse individual researchers. Rendell mentions, among others, artist Mierle Laderman Ukeles, who performs a series of gestures, by placing the users at the center of her actions. Choosing to perform without using any device as mediation, Ukeles represents a radical example of art as agent of empowerment.[22]

The architectural projects never seem to completely satisfy the critical approach to the social dimension, as in these cases users are portrayed as passively engaged actors. Rendell, though, values deeply the practice of Public Works: in particular, she describes their "Park Products" (2004), a project realised for the Serpentine Gallery, where they have generated a series of device that would answer users' needs. What spurs Rendell's approval is the way the practice relinquishes control over the final work, empowering users to autonomously produce spatial solutions.[23]

In summary, Rendell's book explores various practices from both the artistic and architectural realms that embody critical approaches to spatial, temporal, and social dimensions, challenging established norms and generating new perspectives on artistic and architectural interventions.

Rendell presents exemplary instances of what she considers critical spatial practices. Simultaneously, she argues that "criticism is a mode of critical spatial practice"[24] in and of itself, a mode she appropriates

in her own work and one she recognises in the endeavours of other theorists from the fields of art, philosophy, anthropology, history, and design. While the majority of the examples analysed emerge from the realm of art in its broader sense, Rendell asserts that artists are often more inclined to critically examine their own modes of intervention compared to architects.[25] The architectural practices she mentions as representative of a critical approach are relatively few, and their inclusion sometimes underscores their ambiguity or contradictions, highlighting the challenges faced when translating architectural theories into coherent spatial interventions. This weakens the development of a critical approach within architectural practice. The examples seem to be limited to the architecture of official firms - and do not take into consideration minor architectural practices (except for few cases); in addition, the approach developed by the architects listed poses a critical reflection that is actively shared with the many other professionals they collaborate with, an aspect that seems to be underestimated by Rendell. After this initial collection of examples, Rendell continued her investigation through various means. She has co-edited additional works, such as *Space, Place, Site: Critical Spatial Arts Practice*[26] and *Critical Architecture*,[27] where the debate on critical spatial practices is more closely tied to the field of architecture. This last publication promotes the idea that design and criticism should not be seen as separate entities within architectural discourse, acknowledging that practitioners often tend to favor an autonomous and oppositional approach, but she argues that architecture needs to reclaim its dual nature.

Her teaching practice, particularly at UCL since 2017 with the Situated Practice MA,[28] has contributed to the exploration of critical spatial practices, expanded through the development of a collaborative and ongoing digital atlas of contemporary practices.[29]

Finally, Rendell has recently examined the ethical implications of practices as part of KNOW - Knowledge in Action for Urban Equality (2018-2022), a research project aimed at proposing an open access tool on policy and planning, exploring different ethical codes developed by various institutions, professional bodies, disciplinary groups, and research councils.[30]

Fig. 2.

3. Between Nightmares and Cross-benching
According to Markus Miessen, Rendell's perspective on critical spatial practice presents a problematic interpretation. In this context, Rendell appears to give art a privileged position as a discipline that is more detached from economic and social concerns. Consequently, she suggests that art can provide architecture with an opportunity for critical reflection on cultural production. However, architecture is

depicted as contradictory and often lacking in criticality, being excessively reliant on market forces. In this regard, Rendell underestimates the ethical implications of architecture and the tangible responsibilities that this practice must undertake when realizing projects. Miessen questions whether the critical spatial practices described by Rendell might be perceived as unprofessional and neglectful of the consequences they produce.[31]

While acknowledging Rendell's fundamental contribution and sharing her reference theorists Lefebvre and de Certeau, Miessen shifts the focus from the artistic realm as an inspiration for critical culture to a deeper exploration of the architectural realm: his aim is not to contribute to the debate with a different definition of the term, but rather to bring out from alternative spatial practices those strongly informed by architectural culture, that could and should be referred to as critical. In doing so, he adopts the term critical spatial practice as a platform of self-criticism among architects, but also as a tool to reclaim visibility and recognition for those architectural practices acting since long applying a trans-disciplinary and issue-based approach.

In the same year when Rendell publishes her first catalogue of practices, Miessen collaborates with Shumon Basar on the publication *Did Someone Say Participate? - An Atlas of Spatial Practices*.[32] This collection of essays from various contributors aims to map participatory spatial practices and critically question the role of the architect as a creator, moving beyond the conceptualization of the crisis within the architectural profession.[33] The book showcases practices that transcend disciplinary boundaries and share an interest in understanding, producing, and altering spatial conditions as a "prerequisite for identifying the broader reaches of political reality".[34] The presented contemporary spatial practices originate from self-initiated cultural initiatives developed in the 1990s, that were disappointed by self-referential design firms promoting formalism and were shocked by subsequent political, economic, and environmental events.[35] These practices engage in experimental research, critically examine their own discipline, investigate conflicts, stimulate alternative debates, and they often lead to self-generated projects, engage in political and educational programs, advocate for spatial rights and policy design, and manifest strong reactions of dissent against formal practices.[36] Miessen highlights the fundamental turn that occurred in spatial practices at the end of the 20th century, emphasizing the shift from specialization to mediation between expertises and the application of experimental research to engage with "transient conditions of urban society".[37] He also points out that the collection of essays around the term "spatial practice" does not introduce new terms but rather seeks to trace an existing phenomenon that significantly impacts contemporary space production: these practices are tactical, (in de Certeau terms), operating "from outside existing disciplinary networks".[38]

In the introduction to the collection, Miessen and Basar explore some key words that summarise the the shift in the understanding of spatial practices, namely control, empowerment, consensus, participant and tactics, and Basar makes a point regarding specifically the figure of the amateur, in relation to the professional. The main question that rises from this introduction regards who actually is in charge of the urban transformations and for whose interests architects actually operate.

Writer Matthew Murphy elaborates on this in his cutting-edge essay "Glimpses of a future architecture": referring to built architectures of detention camps, space stations, mental health centres, prisons, and contemporary flattering designed spaces, Murphy points out architecture's urgency to constantly perform "organisational and psychological functions", while ignoring its ethical implications, highlighting the important role assumed by architecture in increasing empathy.[39]

Aligned with the vision of an architecture of empathy, Francesca Ferguson stresses the responsibility, and potential, of architects in responding to the economy of scarcity, through transitional interventions. Ferguson analyses the case of Volkpalast in Berlin, inhabited by a long-term project of negotiation carried out by architects and activists against reactionary supporters fighting for the reconstruction of the original facade. The social, cultural and caring activities developed by the "defenders of the Palast as a social and public space" represent the concrete construction of an alternative "dialogical, broad-based and generative" architecture, affecting deeply a shift in the design practice.[40]

As one of the closing contributions, Miessen summarises the turn in the architectural practice towards a critical perspective as a consistent change, where the spatial practitioner stands as an enabler building alternatives against the grand narrative. And it calls to take action all practitioners, students, and researchers from a broad spectrum of disciplines "producing unpredictable results" far from being related to building skills.[41]

Following this publication, Miessen further delves into the topic of spatial practices, particularly focusing on the aspect of participation, through his tetralogy: "The Violence of Participation" (2007)[42], "The Nightmare of Participation" (2010)[43], "Waking up from the Nightmare of Participation" (2011)[44], and "Crossbenching - Towards Participation as Critical Spatial Practice" (2016)[45].

While in the first two volumes deviates on the deepening of the meaning and implications of participation, in this latest book, Miessen turns back to defining spatial practices within the context of a "new culture of space"[46], as that range of actions, methods, and experiments with political connotations. They entail a substantial relationship between humans, objects, and their environment. Practice, or praxis, takes various forms, including immaterial products, and when associated with the term spatial, it signifies

something occurring in space that can have an impact on space. The term critical emphasizes the role of practices as modes of interpreting existing conditions and protocols, as well as their potential to intersect with related disciplines. Miessen formulates critical spatial practices as an alternative mode of practicing architecture, an attempt to alter the prevailing working conditions of architectural practice and question the market within which it operates. He assimilates this definition with that presented in the publication *Spatial Agency: Other Ways of Doing Architecture* (2011)[47]. In both cases, the approach to architecture entails the creation of "agonistic fields of encounter"[48], exploiting misunderstandings and failures as bases for experimentation. Conflicts and feedback become the ignition and core structures of critical spatial practices, with the practitioner assuming the role of a crossbencher who mediates and advocates by interpreting "situated problematics through a spatial framework"[49], an evolution of the concept of the practitioner-enabler, as elaborated previously. Miessen introduces the term crossbencher in relation to practices, politics, participation, democracy, and conflict, citing relevant research and projects such as Suhail Malik's lecture on research as practice (Centre for Research Architecture at Goldsmiths, in 2006), Adam Curtis's publication *The Trap: What Happened to Our Dream of Freedom*," Nicole Deitelhoff's work at the University of Frankfurt, the political role of Josef Fischer, and curator Maria Lind's essay "The Collaborative Turn."

Miessen's tetralogy on participation and crossbenching intersects with another editorial series titled "Critical Spatial Practices," co-edited with Nikolaus Hirsch and published by Sternberg Press. In the first issue of the series[50] in 2012, Miessen once again questions the definition of critical spatial practices, examining how their discursive and physical dimensions influence each other. The urgency to debate the term arose with the emergence of the Occupy Wall Street movement worldwide, highlighting the correlation between spatial changes and "political means of social congregation".[51] Miessen reiterates the need for architecture to take responsibility for all negotiations and mediations performed by individuals and groups in space.

To promote a collective critical reflection on the production of space, the serie has been collecting since 2012 various contributions to reflect on specific topics for each single volume, These topics include consensus-driven formats of political decision-making, the relationship between roundabouts and revolutions, the intersections of mass population displacement and architecture, and the environmental disaster related to the Fukushima radioactive zone, among others. The series involves over sixty contributors, including David Adjaye and Axel John Wieder. Among others, in "consensus driven formats of political decision", Miessen reports a conversation with Chantal Mouffe (second volume, 2012), Eyal Weizman discuss the relationship between roundabouts and revolutions from the 1980s onward (sixth volume, 2015), Andrew Herscher informs on the "intersections of mass population displacement and architecture" (ninth volume, 2017), and the collaborative project "Don't Follow the Wind" narrates the environmental disaster related to Fukushima radioactive zone, narrated through (twelfth volume, 2021). The format of the series gives space to individual practices, from which diverse approaches emerge, equally oriented towards activism and politics, and equally treated as practices with a spatial implication: the role of the crossbencher is addressed through different tools and on different levels, stressing the transdisciplinary approach. In the issues the topics take on a temporal depth, with the aim of rooting contemporary spatial phenomena back into historical transformations.

Like Rendell, Miessen has promoted the debate on critical spatial practices in various spaces, teaching at different universities, such as holding the course "Architecture and Critical Spatial Practice" at the Städelschule in Frankfurt. He has also curated and produced exhibitions and workshops, including "Cultures of Assembly" for the City of Esch (ongoing).

4. Inhabiting an Ever-changing Term

Rendell and Miessen's collaborative efforts have brought together a diverse group of contributors who have shaped and inhabited different interpretations of critical spatial practices. These contributors, including Rendell and Miessen themselves, bring their own unique perspectives and approaches to the definition and understanding of critical spatial practices. While both Rendell and Miessen share a common emphasis on transdisciplinarity and an issue-based approach within the realm of critical spatial practices, their perspectives diverge significantly. Rendell delves into the necessity for artists and architects to embrace a critical mindset, with architects positioned somewhat less maturely in terms of critical thinking. This calls for collaboration and a heightened awareness of the impact they wield. Notably, architects stand to gain valuable insights from artists, who excel at broadening both their domain and linguistic capacities. On the other hand, Miessen broadens the very definition of the term, encompassing a wide array of practitioners, spanning professionals and even amateurs, across diverse fields beyond the confines of art and architecture. He underscores the potential for spatial transformation, particularly championed by those who unexpectedly and profoundly influence this. This extension signifies that spatial practices and their critical implications extend far beyond the conventional boundaries, highlighting the pivotal role played by various agents in reshaping our spatial experiences. The term has gained momentum and is increasingly embraced by scholars, designers, and activists, who actively contribute to its ongoing evolution. Their contributions serve to enrich the term's meanings,

connotations, and applications, extending its reach beyond its original geographic boundaries in Europe and North America. This growing interest in critical spatial practices also facilitates interdisciplinary and transdisciplinary collaborations, fostering the development of educational programs that bridge multiple fields.

Originally emerging from the field of geography and sociology, the term "spatial practices" has been appropriated by the realms of art and architecture, imbued with a critical dimension. However, its influence has now started to permeate other domains, such as marketing, social sciences, and cultural geographies. This expansion into various disciplines demonstrates the broad relevance and applicability of critical spatial practices as a concept that transcends disciplinary boundaries.

What sets critical spatial practice apart is its pragmatic and dynamic nature. It goes beyond reductionist categorizations like DIY, tactical, temporary, and informal, aiming to reclaim professional recognition for practices that engage in politically charged and site-specific interventions. It seeks to empower practitioners and advocate for political engagement by providing a framework for collective action and concrete institutional interventions. The term's significance extends beyond mere speculation on its etymology or a simple consensus on its meaning. It serves as a powerful tool that enables practitioners to challenge existing power structures and advocate for alternative ways of shaping space.

In her contribution to "Critical Practices in Architecture,"[52] Rendell reflects on the efficacy of criticality in addressing contemporary challenges. She raises important questions about the potential of critical spatial practices to offer tangible alternatives beyond mere oppositional stances.[53] The ongoing application of the term and the increasing political resonance of the practices associated with it have the potential to demonstrate the effectiveness that Rendell questions. As the conversation around critical spatial practices continues to evolve, it is important to evaluate its impact and explore new possibilities for its application.

One forthcoming issue of the "Critical Spatial Practices" series, co-edited by Miessen, will feature a contribution by Charlotte Malterre-Barthes on the topic of a moratorium on new construction. While initially appearing as an oppositional stance, a call to halt space production, Barthes' proposition encompasses a proactive framework of concrete applications. It includes measures such as anti-extractive practices, housing redistribution, and curricular reforms, all aimed at dismantling the exploitative culture prevalent in office environments.[54] This example highlights the transformative potential of critical spatial practices to bring about real change and offer tangible solutions to pressing societal issues.

Digital platforms, publications, exhibitions, and workshops play a vital role in showcasing the continued relevance and potential of critical spatial practices in the realm of space production and modification. They serve as spaces for discourse, exploration, and the exchange of ideas, further enriching the evolving understanding of the term. By embracing the dynamic and ever-changing nature of critical spatial practices, practitioners from various disciplines can engage in constant negotiation and collaboration, leading to the construction of effective alternative future scenarios. These initiatives provide avenues for exploring new possibilities, challenging existing norms, and envisioning a more inclusive and equitable approach to spatial practices.

The term's expansion beyond its initial geographic and disciplinary boundaries, its pragmatic and dynamic nature, and its potential to empower practitioners and advocate for political engagement underscore its significance as a transformative concept. The continuous application and exploration of critical spatial practices across various contexts vividly illustrate its potential efficacy in tackling societal challenges and unfurling avenues for alternative futures within the domain of space conception and alteration. How far can this concept extend before dissipating its inherent dynamism and regressing into a mere commonplace label? A conceivable trajectory for the term's evolution envisions its tangible integration into other spheres of society, enabling each individual to grasp their influence and authority over spaces and locales.

If the term's profound essence can be embraced by professionals and even skillful enthusiasts from a range of disciplines — from politicians to factory workers, lawyers to doctors, farmers to engineers — then a more extensive web of critical, operative counteractions stands poised to proliferate and establish roots. Should the term surmount language barriers and accessibility constraints, these practices can, through transdisciplinary collaborations, bolster and fortify a pervasive framework of critical modes for space generation, originating from rights and necessities.

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20. Rendell, *Art and Architecture*, p. 108-109
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Image Captions
Fig. 1. Rooting Critical Spatial Practices, Chart by the Author.
Fig. 2. Portraying Critical Spatial Practices, Collage by the Author.

Biography
Francesca Gotti is an architect and PhD Candidate at Politecnico di Milano. Between 2019-2021 she has been research fellow at DASTU for the European project "En/counter/points", on participatory reactivations of neglected urban spaces. Since 2021 she is assistant professor at USI Academy of Mendrisio for the design studio NEOTOPIA lead by Leopold Banchini. Between 2017-2019 she has worked as exhibition designer in Stuttgart for Atelier Brückner. Since 2015, she mediates projects of reuse of urban commons in Bergamo, through shared management, and she is part of the coordination team of the national network Lo Stato dei Luoghi. Since 2016, she is part of the editorial board of ARK magazine (Bergamo), curating a column on re-appropriation of the neglected landscape of Lombardia.

Transtemporal
Unlocking Time in the Architectural Discourse

Kouvari, Maria[1]; Hess, Regine[2]
1. ETH Zurich, Department of Architecture, Chair Construction Heritage and Preservation, Institute for Preservation and Construction History (IDB), Institute of Technology in Architecture (ITA), Zurich, Switzerland, kouvari@arch.ethz.ch
2. ETH Zurich, Department of Architecture, Chair Construction Heritage and Preservation, Institute for Preservation and Construction History (IDB), Institute of Technology in Architecture (ITA), Zurich, Switzerland, hess@arch.ethz.ch

Abstract

The conceptualization of time today appears relatively weak in design-led branches of the architectural discourse, dominated by the distinction between diachrony and synchrony, and thus locked in two axes whose entanglement is sometimes overlooked: one highlighting continuity across time (structure), the other situating it in a specific context (event). In opposition, architectural theory since the 1980s has developed a dialectical, non-essential understanding of structure and event, space and time, or ground and figure, mainly in discussion with French linguists and structuralists. In view of architecture's shift towards the engagement with the existing building stock and an ever-expanding definition of heritage, this paper posits the onset of the term transtemporal, which refers to the conjuncture of preservation, memory, and time scales in the architectural discourse. Built heritage can therefore be perceived as a possible bearer of the dialectic expressed in the linguistic concept of the synchronic and the diachronic, e.g., the present object as a container of the future of the past (Eisenman 1995, 504).

The attempt to rethink the synchronic and the diachronic under the premise of the "transtemporal" is found upon two sets of reflections: first, the ongoing quest for methodologies based on "inter-crossing" (Werner, and Zimmermann, 2006), witnessed by the rise of research on transnational and transcultural phenomena and the claim for transdisciplinary, and second, the until recent emergence of oxymora, such as "the past as resource," "archive of the future," and "future monuments," highlighting the need to revisit temporal interrelations from the disciplinary vantage of architecture.

The methodological approach combines literature on the conception of time in the fields of both architecture and preservation from the first half of the 20th century (Riegl, 1903; Giedion, 1941), focusing particularly on transtemporal perspectives from the humanities, and social sciences, where the term became fruitful (Serres, and Latour 1995; Armitage, 2012).

Engaging with the concept of "multiple temporalities" (Jordheim, 2012), our objective is to enable an understanding of the multitemporal structures of the built environment. A transtemporal approach invites us to revisit the modern dichotomy of past and future and rethink the composition of temporalities by means of values and experience, pointing toward the ongoing debate on sustainability and the reenactment of the existing building stock.

Key words: transtemporal, temporalities, architecture, preservation, repair.

1. Introduction: A Question of Time in Architecture
"Every historical era is likewise multitemporal, simultaneously drawing from the obsolete, the contemporary, and the futuristic. An object, a circumstance, is thus polychronic, multitemporal, and reveals a time that is gathered together, with multiple pleats."[1]
Michel Serres and Bruno Latour, *Conversations on Science, Culture, and Time*, 1995

It seems that the 21st century is experiencing a shift in architecture and planning, devoted to the engagement with the existing built environment. Reuse, repair, restore, refurbish, renovate, and repurpose, among others, reveal an emerging trend in the architectural discourse, theory, and practice, manifesting in educational curricula and becoming an objective of architectural design.[2] However, reconsidering our engagement with the existing building stock also involves a reconsideration of our relation to time and temporality as well as to the simulation of time. Maintaining and repairing what already exists is, nevertheless, what the discipline of historic preservation has been engaged with since its beginnings in the eighteenth century, regardless of the inequality with which the built environment is being valued and treated: On the one hand, high-value objects are designated under protection, today often following conservation standards defined in the 1964 Venice Charter, especially the value of authenticity, and on the other hand, there are buildings that are transformed or even demolished which are considered useless for conceptualizing the past, time passing, or history. Attitudes and practices of preservation are also oriented to "historical" and "age" values, considering the thereby highlighted built artifact as a cultural witness, restoring, or conserving it respectively,[3] while architecture not under preservation standards follows the dynamics of design, function, economic trends, and resources, embedded in a cycle of construction and demolition.

This imbalance dominating the way we deal with the existing built environment could be interpreted as a cleavage between the diachronic (through time [monument]) and synchronic (at-one-moment [useful/useless stock]) perspectives. However, each of these undertakings, whether preservation or architecture-driven changes in the existing building stock, seem to be the result of an amalgam of actions and interventions from the past, present, and future. This line of thinking follows the concept of plurality of times. As Helge Jordheim puts it, according to Reinhart Koselleck "every concept has 'its own internal temporal structure,'" "a three-part structure comprised of all three dimensions of time,"[4] while Michel Serres and Bruno Latour illustrate an object as "multitemporal," that "reveals a time that is gathered together."[5] Such concepts of *multiple temporalities* challenges, as Koselleck reminds us, the regime of time since the early modern era, signified by the relation between the *Erfahrungsraum* (the past as a space of experience) and *Erwartungshorizont* (the future as an open horizon of expectations), their temporal distance reduced by the concept of *progress*.[6]

How can the built environment and the architecture-driven changes be perceived through a prism of how the past, the present, and the future are fanned out? Sigfried Giedion's *Space, Time and Architecture: The Growth of a New Tradition* (1941) as a critical study of modern architecture calls for the restoration of the "intimacy of life" and the "sense of human scale."[7] Four decades later, Ingrid Leman Stefanovic with her essay Tem*porality and Architecture: A Phenomenological Reading of the Built Form* (1994) illuminates how architects externalize and hypostasize time reliant upon clock time.[8] In his writing *Fluid Architecture*, Ignasi de Sola-Morales poses the question of whether it is possible to think of an architecture that is "more of time than of space" and "whose objective would be not the ordering of dimensional extension but movement and duration."[9] Since the beginning of the 20th century and especially since the spatial turn, architects and planners are preoccupied with space. Yet, the nature of temporality is demonstrated through the words old, new, historical, and contemporary, as well as words with the prefix re-, such as rehabilitation, restoration, and renovation – the latter incorporating the verb renew (*novare*).

In a time when presumably "heritage [is] everywhere"[10] – and when the boundaries between architecture and preservation are increasingly becoming blurred –, this paper posits the emergence of the term transtemporal into the architectural discourse. It proposes the reflection on the temporal structure of the built environment and design interventions, and endeavors to offer a critical window into the understanding of the object as the intersection of these temporalities. Engaged with the notions of time and temporality, we aim to enable an understanding of multitemporal structures of the built environment in relation to architectural and preservation interventions, and to make some very first steps on a new route in attempts to re-read and re-enact the existing built environment.

Through bibliographic research, theoretical and empirical elaborations are combined, drawing on literature on the conception of time in the fields of architecture and historic preservation, transtemporal perspectives from the humanities, social sciences, and neurobiology, where the term has appeared,

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and pertinent positions on the existing built environment, as manifested in recent articles, papers, books, and ultimately conference calls. Opening with the term transtemporal, we present its etymology, definition, and meanings, as well as its wider context. The main part is devoted to the ideas of Alois Riegl, revisiting his system of valuation of the built environment from a transtemporal perspective by including an emotion-based perception. The final part offers a first overview on new perspectives in spatializing the concept of the transtemporal in architecture, suggesting how it could be relevant for reading and designing in existing architecture.

2. Transtemporal: Etymology, Definition, and Meaning
The term transtemporal is a composite word, consisting of the prefix trans- (beyond, across, through), and temporal. It hosts different meanings: "relating to time," "of limited time," "lasting a short time only," or "secular" as distinguished from ecclesiastical. The former meanings have evolved during the etymological itinerary of the word over time, related to the Latin word *temporālis*, which means *terrestrial*, *earthy*, which stems from *tempus*, meaning "season," "time," "opportunity" from the Proto-Italic word *tempos*, to "stretch, measure," from the root *ten*, "to stretch." In anatomy, the term has taken another meaning, referring to the bone and lobe located near the temples at the inner sides of the forehead. The latter followed another etymological path deriving from the Latin word *tempora* – the thinner part of the side of the skull – related to the word *templum* or the "temple of the head." Respectively, the term transtemporal refers to "transcending time," "relating to time travel," or "the influence or communication between one time and another." Furthermore, the term transtemporal in philosophy means "persistent across time," while in anatomy the meaning is "across the temporal lobe of the brain."[11]

In the last decade, the word was coined with a new meaning in the field of history, in analogy to transnational history. In his paper *What's the Big Idea? Intellectual History and the Longue Durée* (2012), David Armitage appropriated the term to propose the "rapprochement" between the diachronic and synchronic perspective in writing history.[12] Taking a critical stance towards intellectual history – the study of ideas of the past focusing on agency and contextualization, and thus the synchronic and the short-term[13] – Armitage's concept of transtemporal history shifts the focus on "linkage and comparison across time" and proposes a method of "serial contextualism" as a method of "joining diachronically reconstructed contexts across time – transtemporally – to produce longer range histories which are neither artificially punctuated nor deceptively continuous."[14] However, he associates the transtemporal with the return of the *longue durée* (long duration) where the studies of historical structures, conjunctures, and events intersect – an approach to the study of history elaborated in the French Annales group of historians stressing the quasi timeless structures of the landscape, superimposed by the long-term conjunctures of cultures and, on top, the history of events, or the short-term.[15] Koselleck has further refined this dichotomy by providing different forms of representation for different layers of time, namely, "that 'events' can only be narrated, 'structures' only described," because structures protrude beyond the space of experience.[16] As the description (and analyzation) of structures expands concepts of temporality, Armitage's transtemporal history proposes a return to the time-bound dialectic favored in approaches, such as big history, deep history, evolutionary history, and the history of *longue durée*.

Armitage's transtemporal history can also be situated in the approach of *histoire croisée* (crossed history), elaborated by the sociologists Bénédicte Zimmermann and Michael Werner, which focuses on the inter-crossings of spaces, times, scales, categories, and viewpoints, as well as their effects and repercussions. *Histoire croisée* stresses the "multiplicity of possible viewpoints" and "self-reflexive processes."[17] Much like Armitage's concept of the transtemporal, the concept of *histoire croisée* differs from comparative studies, where the analytical framework is statically based on a synchronic perspective, and from transfer studies, where the frames of references become lost within a diachronic perspective. This idea of bringing together "intellectual formations that are somewhat in tension with each other" is also found in Dipesh Chakrabarty's thought on the "cross-hatching of Species History and History of Capital," which he considers "a process of probing the limits of historical understanding."[18]

As this paper is targeted to the architectural discourse, it should be mentioned that the concept of *histoire croisée* – alongside Mary Louise Pratt's concept of *Contact Zones* – has already entered the field of architectural history, appropriated by Tom Avermaete, Cathelijne Nuijsink, and Hernández Jorge Mejía in several contributions,[26] as a method of investigating alternative historiographies. Intended to promote multiplicity and plurality, these positions serve as a basis for the temporal investigation of duration and intervention in the built environment.

The term transtemporal when introduced to the architectural discourse raises the questions of temporality or historicity, not only in terms of architectural references, but also in terms of physical vestige itself. Thus, it prompts us to revise our perception of, and intervention in, the built environment from the disciplinary vantage of historic preservation and architecture.

3. The Choice of the Term for Architectural Discourse
The necessity of the concept of the transtemporal within architecture is founded upon two sets of reflections. The first is an ongoing quest for nuanced approaches, permeable boundaries, and "inter-crossing methodologies,"[19] witnessed by the rise of terms such as transnational, transcultural, and transdisciplinary in the humanities. The second is a resources concern, rooted in the consideration of the impact of human activity on the environment, among which building activity occupies a special role, highlighting the need to rethink and understand the role of the long durée and its multifold temporality within architecture. These smolder in architectural debates on "the past as resource" or the "archive of the future," but also in oxymora such as "archaeology of the future," "future monuments," and "future heritage," which in fact attempt to go beyond the early modern disjuncture of past and future.[20] They also point to Peter Eisenman's notion of memory as the presence of the future in the past.[21] Alois Riegl's "age value", which is discussed below, adds a fin de siècle concept to this palette.

Many recent epistemological, ecological, temporal, and transtemporal considerations have unfolded at the confluence of two interwoven conditions: globalization and climate change. Since the late 1980s, there has been an "intensity of connections and border-crossing exchanges," visible in a turn in the social sciences and the humanities towards the study of the interrelation among entities.[22] Shifting the focus from discontinuities to conjunctures, such approaches have an impact on architectural research and practice, questioning disciplinary boundaries, objects of study, and methods. Among others, Jorge Otero-Pailos with his concept of *Experimental Preservation* questions the boundaries of preservation through experimental interventions into historic and cultural objects, focusing on the modes of operation and aesthetics.[23] In a more artistic manner, the artists Maria Lalou and Skafte Aymo-Boot advocate for the preservation of an unfinished construction site of the 1960s in Athens, which they present as a cultural object, juxtaposing it with the Parthenon. Holmes, Lalou, and Aymo-Boot name this built object an *Anti-Monument*, in the sense that it "inverts modernity's narrative of upward mobility and endless expansion," as "much as the classical monument conceived of as the object of historical preservation and craftwork invert the temporal narrative of ruin and decay."[24] The *Anti-Monument* is perceived as a "capitalist ruin," a built document of the financial crisis of 2008.[25] Alongside the unfinished construction sites it represents, the Parthenon narrates a paradox: although it has been a constant "construction site," it has been reconstructed and conserved for the 20th century veneration of Western civilization, as an ostensibly untouched-by-time "work of art."[26] In search of an "anti-monumental kind of care,"[27] the concept of the transtemporal endeavors to add to such a way of thinking on how we deal with the built environment in terms of time and temporality.

Unlike globalization, planetary climate change gained momentum first in the 2000s, when its signs became alarming and thus "politically and economically inescapable."[28] A scientific consensus among disciplines over anthropogenic climate change fueled a shared concern over the impact of human activity on the environment. As such, a "longer view on history" is flourishing, not only to "understand our species but more firmly to secure its future."[29] In the field of architecture, sustainability, ecological justice, and resources have largely been associated with the notion of repair. As Arturo Escobar wrote, "design with the existing" is an "antidote to the abhorrent forms of violence foisted upon the Earth and all its living beings, humans and not, by patriarchal capitalist colonial regimes that have become entrenched."[30] Like Alan Weisman's thought experiment, in which "the world is without us,"[31] the international initiative *A Global Moratorium on New Construction* by Charlotte Malterre-Barthes and the architectural practice b+ suggested a future of the year 2044 in which we "do not demolish," "not build new," "build less," "build with what exists," "inhabit it differently," while "caring for it."[32] An interesting side of this initiative is the temporal disconnection of past and future disjuncture in the sense that the authors are proposing to live our present based on a future scenario of extinction. This kind of expectation of the end times allows us to look back to Koselleck, who mentioned catholic eschatology as a prerequisite of the non-linear understanding of time in the Middle Ages.[33] However, a transtemporal perception of the built environment suggests reconsidering our engagement with it, focusing on the contradictions and intersections of time scales in the longue durée.

4. Revisiting Riegl's Dichotomy of Past and Present
For Alois Riegl, the material dimension of a surviving building was the surface on which time and its traces could be read as on a palimpsest. It possessed, if you will, temporality (instead of past). Riegl regarded these imprints of time also as traces of its immaterial superstructure of nature and society.

Through the tradition of the building and its alteration as testimonies of change, Riegl saw the tradition of and connection to its immaterial superstructure as also given. Mindful of this constant change and the cultural history-based spreading of history into histories, Riegl conceived the "age value" as an essential reason for protection in the "modern cult of monuments" in the 20th century. As a reason for preservation, it stood next to "historical value," intertwined with it in a diachronic-synchronic relation comparable to Saussure's thinking on language and semiotics. According to Riegl, the "historical value" has its roots in the Renaissance, when buildings and works of art from antiquity were declared to be a standard of contemporary creation. Since then, the canon of monuments has been reduced to smaller and smaller artifacts that are only significant in terms of cultural history, enriching and at the same time diluting the canon to an infinite degree.

In Riegl's words, "age value" is experienced subjectively-sensitively and less rationally-cognitively than "historical value."[34] This way of experiencing is stimulated by aura and authenticity, as presently existing qualities, and less by ornament and form as qualities from the past. Consequently, a building can be recognized as heritage by its being "able to speak directly to the feelings" – a process that Riegl stated "for a certain number of European cultural peoples" and extended by the "memory value."[35] Works of the past become monuments only when the "modern subjects" subordinate to them "the sense and meaning of monuments:" according to Riegl, that a work with traces of age reminds us of results from our own doing, not from the thinking of the creators.[36] Identification with it can even go so far that "modern man [sees] a piece of his own life in the monument and [feels] every intervention [...] as disturbing as an intervention in his own organism."[37]

This sensitivity towards historic architecture may not have diminished in the course of the 120 years since Riegl's text, but it has certainly changed. In 1993, Wilfried Lipp, in his discussion of Riegl's *Modern Cult of Monuments*, proposed two new, postmodern values: "process value" and "plurivalence value."[38] By this he meant a renewal of the "age value" through respect for a historical process and its traces of change on the monument, as well as the opening of *denken* (thinking) in *Denkmal* (monument) for the diversity of (postmodern) life, i.e. for many and not only for above predefined values.[39]

Riegl's dichotomy of "historical value" and "age value" has itself become historical. What has survived, however, is the sense of a process that is allowed to unfold – Riegl gave the example of the ruin, whose decline gives expression to the passing of time and a circular process of becoming. Memory foundation is not broad enough a description of this expression; the foundation of a feeling of transtemporality might fit better: a feeling for the passing of time, not necessarily along an objectively linear advancing conception of time. The neurobiologist Antonio Damasio used the term spirituality to describe this positive "sensation that the processes in [an] organism are running with the greatest possible perfection."[40] Damasio's exploration of the connection between brain, mind, and feelings leads back to Riegl. The latter, in 1903, at the height of empathy aesthetics in philosophy and aesthetics, had naturally assumed the affective potentials of old houses and their reception through empathy.[41] Damasio, in turn, has refuted the separation of mind and feeling, which ultimately goes back to René Descartes, by means of neurobiological experiments on brain regions and their jointly fulfilled functions, thus denying the "modern project of 'totalizing reason'" (the criticism of Lipp in the words of Wolfgang Welsch).[42]

The term transtemporal now offers the possibility of an interdisciplinary thought experiment that brings together brain activity and perception of such 'transtemporal' testimonies as buildings marked by age (what condenses in the ruin). In the temporal lobes of the brain at the temples lies the *amygdala* (almond nucleus). Damasio shows that there and in sections of the frontal lobes, "metaphorically speaking, reason and emotion 'overlap.'"[43] The "system connection" of these regions indicates, as Damasio suggests, a relation to social behavior.[44] He states that patients show a reduced ability to live when these brain regions have been damaged, e.g. by a tumor: roughly speaking, they no longer feel, are incapable of making decisions, and cannot muster the necessary cooperative behavior in family, profession, and society. In the second part, he arrives at "mental images" that these patients can no longer form and experience, since they have also lost access to stored knowledge and updating through visual stimuli can no longer take place.[45] It is certainly too complicated and needs further explanation to connect the transtemporal with the knowledge from neurobiology, which is only superficially spread out here. However, the term is based on more than only an association with perception and its processing, but in an ability of the brain to transcend the times, not only to store the results of this process in "mental images," but also to update them continuously.

If one considers the value of a building as a monument, and, like Riegl, takes the sensation of this value as a basis, it becomes a *sensory monument*. Transtemporally considered, it is a time traveler and emits

visual (also haptic and olfactory) sensations that stimulate certain brain regions to perceive, remember, and update knowledge. Thus, it would actually be connected to the organism as Riegl has claimed.

Perception can happen just as purposefully as unintentionally. Transtemporality in the building stock can only unfold in context, however, if the monument has a certain context and lifespan. For today we are faced with the situation that buildings are being demolished faster than the monument preservation authorities can inventory them. Here Riegl's "novelty value" comes into consideration, criticizing a "unity in form and color" that are impossible for a monument.[46] If in Riegl's time the problem was that old buildings were made to look new, today it is the ever more rapid cycles of new construction and demolition that make the "novelty value" absolute. Thus, if the building stock is continuously renewed through demolition and new construction, the condition of "multiple temporality" in the built environment gets lost. At the same time, the perception of damage to the superordinate ecological organism arises in times of such a waste of resources, which, as the worldwide protest movements show, are perceived as painful and threatening. The loss of, one could say, "stores of time, emotion, and knowledge" is also felt by the memory-storing brain. At this point, we should again refer to Lipp's "plurivalence value," with which the author wants to break the determination of the monument value to a certain (occidental) canon of values. On the other hand, the characteristic of transtemporality is not contradicted by the constant adaptation of the built environment with, at most, moderate demolition; the condition of "multiple temporality" is only given by the temporal layering of a city or a landscape.

5. Conclusion and Outlook
The paper is prefaced by a quote from a conversation between Serres and Latour, saying that a historical era is polychronic, entangling obsolete, contemporary, and futuristic entities. This, the authors sought to demonstrate, can also be said about buildings seen through the lens of preservation. Riegl has spread out this simultaneity in a system of values (or inherent conditions), thus demonstrating the dialectics of the transtemporal state of architecture.

An old house protrudes from the past into the present and must be prepared for the future, while the architect is aware that his/her intervention contributes to its status as – in the dialectics of Eisenman – a container of the future of the past. However, repair leaves architecture and sites marked by age in their condition with only minor changes. The image of the palimpsest, a parchment on which the old writing has been scratched off, but still peeps out from under the new one, seems more apposite when we talk about reading and designing in existing architecture with the concept of the transtemporal. Again, it was Eisenman who introduced the palimpsest in reading the existing stock and adding new forms. He expressed his notion of presence of the absence in an indexical relation.[47] For the work with the existing, the transtemporal perspective can add new strategies, such as emphasizing the dialectics of the diachronic and the synchronic and the difference of temporality in the design of structure and event.

Fig. 1

Hans Döllgast's repair of the war-damaged ruin of Leo von Klenze's Pinakothek in Munich is an often-cited example for successful reconstruction while creating a memorial of the war. Fred Scott chose it to explain his approach, talking about "the responsibility of the designer […] to carry a building over from the past and through the present, so that it will survive into another age. That is, the requirement of the designer who works on an existing building not to damage but rather to elucidate its essential nature."[48] With the concept of the transtemporal, we can foster Scott's consideration by looking closer at Döllgast's repair (Fig. 1). He closed the arches of the open gallery on the first floor with glass, and the bomb gap of the south facade with bricks. Behind it he laid a monumental two-flight staircase (Fig. 2). In front of the brick wall, he placed steel columns to illustrate the bearing of the wall (although the wall bears the weight). Thus, he continued the facade structure with the columns, cornices, and rustication at the base, without resorting to the historical ornaments and history, but did not disturb its coherence. But his intervention went further: Döllgast moved the entrance to the less destroyed north facade, so that the main facade became the back. The new entrance with the large staircase led the Pinakothek into its future as an art museum of mass society and towards its experience as a modern spiritual building.

Fig. 2

As Döllgast has impressively demonstrated, the intervention and preservation make visible and comprehensible the existing artifact (structure), helping, in the words of Scott, "to elucidate its essential nature." The transtemporal suggests the compatibility of old and new, artifacts and intervention, and therefore, an architecture not erasing the feeling of time.

As Riegl already pointed out already 120 years ago, in the phase of mass society, big cities, and industrialized landscape, historical features are fading in favor of traces of age and memory. Historical stock is sometimes only distinguishable from new stock by architecture experts, and together with the increasing number of reconstructions, historical-linear style sequences and their offers of interpretation are becoming more and more blurred. What remains is architecture's capability for transtemporality, which, as the largest man-made inventory, is capable of transcending time (rather than history) and stimulating human memory. In response to the actual challenges of extensive demolitions and constant alterations – which do not allow the buildings to acquire "age value" – the notion of transtemporality offers an additional perspective from which to criticize today's culture of obsolescence.

Notes

1. Michel Serres and Bruno Latour, *Conversations on Science, Culture, and Time* (Ann Arbor: The University of Michigan Press, 1995), 60.
2. See among others: Florian Hertweck and Milica Topalović, ed., *The Great Repair: Politics for the Repair Society. A Reader. ARCH+ Journal for Architecture and Urbanism* 192 (Leipzig: Spector Books, 2023); Silke Langenberg, ed., *Upgrade: Making Things Better* (Berlin: Hatje Cantz, 2022); Markus Berger and Kate Irvin, *Repair: Sustainable Design Futures* (London and New York: Routledge, 2022).
3. Alois Riegl, *The Modern Cult of Monuments: Its Essence and Development*, trans. Karin Bruckner and Keren Williams, in *Historical and Philosophical Issues in Conservation of Cultural Heritage*, eds. Nicholas Stanley-Price et al. (Los Angeles: Getty Conservation Institute, 1996): 69–83.
4. Helge Jordheim, "Against Periodization: Koselleck's Theory of Multiple Temporalities," *History and Theory*, no. 51 (2012): 165, https://doi.org/10.1111/j.1468-2303.2012.00619.x.
5. Serres and Latour, *Conversations*, 60.
6. Reinhart Koselleck, "'Erfahrungsraum' und 'Erwartungshorizont' – zwei historische Kategorien." in Reinhart Koselleck, *Vergangene Zukunft. Zur Semantik geschichtlicher Zeiten*, 2nd. ed. (Frankfurt am Main: Suhrkamp Verlag, 1992), 366.
7. Sigfried Giedion, *Space, Time and Architecture: The Growth of a New Tradition* (Cambridge: Harvard University Press, 1941).
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Image Captions

Fig. 1 Hans Döllgast, Alte Pinakothek, Munich, Reconstruction, South Façade, 1957, Photographer unknown © Architecture Museum of TU Munich, doel-139-1008
Fig. 2 Hans Döllgast, Alte Pinakothek, Munich, Staircase, Year unknown, Photographer: Sigrid Neubert © Architecture Museum of TU Munich, doel-139-1001

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Biography

Maria Kouvari is an architect and urban designer, currently a doctoral researcher at the Chair Construction Heritage and Preservation at ETH Zurich. Her doctoral research explores the built heritage of children as an underrepresented group, and has been awarded scholarships from the Sophie Afenduli Foundation, Lausanne, and the Foundation for Education and European Culture, Athens. Kouvari holds a professional degree in architecture from the University of Patras in Greece with the highest distinction (2013), in 2015 she completed the Master of Advanced Studies in Urban Design at ETH Zurich, and in 2016 she

obtained her second Master of Advanced Studies in Housing. Her research interests lie at the intersection of urban studies, architectural history, and heritage preservation.

Regine Hess is an architecture historian and curator. She is a Senior Researcher at the Chair Construction Heritage and Preservation of ETH Zurich. Her current research areas are mediation of architecture history and heritage, and exhibitions studies. Regine's PhD thesis on architectural psychology (2013) was awarded with the prestigious Theodor-Fischer-Prize by the Central Institute of Art History in Munich. She is the leader of the research and exhibition project "A Future for *whose* Past? The Heritage of Minorities, Fringe Groups and People without a Lobby" in occasion of the 50th jubilee of the European Architectural Heritage Year in 2025. At the Technical University of Munich, she is a habilitation candidate. Regine is also a member of the editorial board of *kritische berichte, Journal of Art and Cultural Studies*.

Redistribution
Domestic space and Land Sharing in Mexico City's urban centre

Lozano Lara, Lola
Architectural Association, PhD City/Architecture Programme, London, United Kingdom, lola.lozano@aaschool.ac.uk

Abstract

This paper proposes a re-evaluation of the notion of "redistribution" in the context of land and its relation to domestic space across situated histories. The review of this term is part of a larger study that considers housing typology in Mexico City over a period of five hundred years of colonialism and sovereignty. Rooted within well-established philosophical discourses, "redistribution" has been used in relation to questions of equality and justice, also being directly applied to theories of political economy in relation to class differences. In other words, economic restructuring that considers class-like collectivity may provide a remedy for injustices. Within the architectural discipline, questions relating to the distribution of land and property for the purpose of housing different social classes and ethnic groups, together with the divisions and inequalities that result over time, can cast fresh light on such theories of redistribution.

The term "redistribution" has often been accompanied by defining categories, such as the Marxian redistribution of wealth or the distinction between redistribution and "recognition" put forth by Nancy Fraser. Here, subjectivity comes to the fore, raising questions about the possibility of a philosophical model in which economics, cultural differences, and group identities can overlap. This paper is not only grounded upon—but also responds to—such a purely ontological approach, by recording specific indigenous processes of living patterns within a delimited physical context that radically changes over the long political history of Mexico City's urban centre. Through cases studies, the paper reflects on the possibility of describing the sharing of land and housing as an alternative means of redistribution that does not rely on classification, division, or displacement, but rather points to the ongoing transformation of cultural life patterns that endure within a situated context and continuously redefine how living spaces are shared.

Key words: redistribution, land, domestic typology, recognition, sharing.

1. Land

The value of land for redistribution in Mexico City has long been much contested. Since the arrival of the Europeans in the Americas, such redistribution has generally been considered in economic terms, with land that can be capitalised on as domestic space ultimately proving the most valuable. Today, the fair (re)distribution of land (or resources) is perceived as being central to the achievement of justice. In the context of colonised lands, however, the problem goes beyond the mere reorganisation of those resources that are still available, because those resources that have been depleted over time owing to ongoing violent extraction must also be considered. As such, if a reckoning moment of redistribution is to occur, it may be the case that the totality at that moment is altogether different from the totality of the period of colonisation. Indeed, when a form of redistribution follows a preceding abuse of power, the just redistribution—or restitution—of what was taken may become too complicated, or may turn out to be insufficient, in light not only of the lost legacies, but also of the remaining subjects who directly or indirectly carry the privilege of their continuing relation to those who benefited from colonisation.

In the specific context of domestic space, the Spanish *traza* (urban plan) for Mexico City dating from the sixteenth century underwent various transformations, which ultimately resulted in the redefinition of the ways in which domestic spaces were shared. Many of these changes were influenced by the different combinations of ethnic groups that populated the area in question, because political changes often affected the value of the city's land, driving different social classes into, as well as out of, the city centre. During the sixteenth century, for instance, the Crown determined that the centre of the *traza* would be exclusively for European residents, with indigenous groups being restricted from entering this area, unless they worked as servants in such households. In the twentieth century, by contrast, working-class families took up residence in the very same area, within the same subdivisions and many of the same buildings, in order to start living their own version of domestic life—one in which sharing is central.

This kind of redistribution does not involve transferring land titles from one social group to another. That occurs only rarely. Rather, the increasing organisation of the working class opened up the possibility of everyday living practices being shared and redistributed among a group of residents, as a form of domestic economy, in a way that transcended the rigidity of the previously plotted land (which often did not officially belong to them). The architectural feature that enabled such sharing was the courtyard—especially the courtyards of *vecindades* that were shared by many unrelated individuals.[1]

Nancy Fraser, the philosopher and critical theorist, searching for categories that allow issues of equality, fairness, and justice to be explored, has developed the notion of "redistribution against recognition."[2] Building on this philosophical grounding, this paper explores the question of redistribution as it relates to the value of the land in one part of Mexico City—specifically, the sharing of domestic spaces in both pre-colonial and post-colonial contexts. It does so by considering three case studies, each of which elucidates a cultural practice that has not only lasted for a long period of time, but is also characteristic of domestic practices across time.

My intention is not to provide a history of how land in Mexico has changed hands or how politics has generated new forms of redistribution. I do not focus on the policy changes that facilitated the transfer of land titles from corporations (ecclesiastic as well as indigenous) to private individuals, which resulted in new forms of sharing residential spaces and, consequently, social reorganisation. Nor do I consider whether transferring land titles has satisfied the need to redistribute the existing housing provision. These are all important issues, but this study emphasises a continuity of architectural typology and a continuing form of living that remained resilient in the face of the various transformations of the city's urban centre. Indeed, by considering examples that span a long and changing history, it is possible to identify not only a type's physical permanence, but also the accompanying living practices that define a form of redistribution integrating economic with cultural practice[3].

Over the past few decades, the rift between "redistribution" and "recognition" has widened, owing to increasing multiculturalism, as well as the traditional politics of the left. The debate has generally been concerned with a quantitative measure of justice that can be redistributed, on the one hand, and the qualitative loss that has been experienced by marginal groups, on the other—these groups require recognition before any form of redistribution can follow.[4] As such, the debate is fundamentally centred around the question of justice: should there be a leaning towards "redistribution," a leaning towards "recognition," or can a happy medium between the two be achieved? What is more, should the separate category of "representation" also be considered, bringing a political dimension to the debate?

One key reason for considering Fraser's distinction between justice and injustice in relation to the redistribution of domestic space in Mexico City is precisely because it engages with the contradictions that are inherent in the politics of globalisation—especially its lack of space for different understandings of "sharing" to be included. In following Fraser's thought, it is also important to emphasise that narratives of cultural representation and wealth distribution have been accompanied by the politics of globalisation since the sixteenth century, a time when new asymmetries of power were imposed, during the invention of the so-called "new world."[5]

Prior to globalisation, in Mexico (and elsewhere), there was an established form of land redistribution that considered domestic space to be the centre of social and political order. In architectural terms, it was expressed through the courtyard.

2. The courtyard as an architectural device of redistribution

As it appears in Mexico, the courtyard—or patio—is a continuing architectural device that has been present throughout the country's long history of domestic space. As a central feature of building complexes, it is a means of organising the social life of groups of residents, who are sometimes united by, and sometimes separated by, issues of kin, class, and ethnic origin. Not only do these courtyards appear at various scales, but they can also be used for further purposes, too. In essence, a courtyard is a central space that is surrounded by an array of buildings, which are domestic in a broad sense: not only are they used for residential purposes (as spaces for cooking and sleeping, for instance), but they are also used for the living of domestic life more generally (as spaces of work, leisure, and religious celebration). As such, a building complex as a whole combines individual houses with an overarching neighbourhood. Such an arrangement can be found as far back as pre-contact Mesoamerica. And even though the architecture changed significantly following the arrival of the Europeans, the typological structure designating a central courtyard is still to be found throughout Mexico, especially in the historic centre of Mexico City.

The following sections present three instances of the courtyard as a consistent typology within the restricted area of the city (the Spanish *traza* dating from the sixteenth century) before, during, and after the colonisation of Mexico. Each courtyard acts as the primary means of redistribution—although such redistribution involves not only the subdivision of the available land, but also the sharing of the resources that are available to the neighbourhood. In each case, however, the resources that are continuously redistributed are in fact land. Even so, the cultural and political aspects of Fraser's "recognition" are also at work in such instances of "redistribution,"[6] because each courtyard involves not only a sharing of land, but also a sharing of sociocultural organisation.

The distribution of land over time was most fundamentally shaped by the ruling state's perception of its political value. For the Nahua state, for instance, a complex with a central courtyard was itself political, as the sense of a neighbourhood as well as the communal caretaking of communal landholdings encouraged the perception of a collective whole, with direct agency in the state's governance. By contrast, the shared houses of the colonial period—which were similarly organised around a courtyard that orchestrated residential and other uses—did not have this same political agency, because the economic value of an individual plot of land was greater than the political value of a neighbourhood. Nonetheless, there was no straightforward shift from an indigenous tradition to a colonial one. As such, the persistence of the neighbourhood is still to be felt in the courtyards at the centre of Mexico City, as a means of communal resistance to an environment that has increasingly favoured market economies.

3. *Calli*, Nahua households, and neighbourhoods

To begin, though, it is necessary to explain how the typology of the house itself was shaped by sociocultural practices. What follows is a brief outline.

Calli is the Nahuatl word used to translate the understanding of a house (*casa*) into Spanish. However, the term *calli* is seldom used by itself, as it would be the case of its *casa* counterpart, because it does not signify a modern individual structure (building) containing a single household. Rather, various *calli* organised around an open space—a patio—would usually articulate a Nahua shared living complex. Interestingly, this arrangement was similar to some forms of residential organisations that were present in Spain, where differentiated—yet combined—groups of households lived together: these included monastic complexes—including monasteries, convents, and colleges—as well as private residential accommodation, such as aristocratic houses and *casas de vecindad*.

Most accurately, the Mexica word *tlaxilacalli* signifies "a bunch of houses" or a "hamlet" that is surrounded by water.[7] In Nahua studies, this is close to the meaning of "neighbourhood." What is most intriguing about these definitions, though, is that they conceptualise a collection of buildings as a single house. James Lockhart, the anthropologist, has pointed out that there are no differences between the singular and plural forms of inanimate objects in Nahuatl. However, by looking closely at the ways in which the word *calli* was previously used, especially in documents relating to land and wills, it can confidently be inferred that the term was used to describe a physical structure (building or house) that forms part of a larger compound, organised around an inner courtyard. Each *calli* is part of the compound, with a single opening that faces onto the courtyard. And even though the courtyard is not mentioned in such documents, the orientation of the *calli* is, thereby suggesting that the courtyard was so fundamental to the Nahua understanding of a living compound that when a *calli* was being described, there was no need to make reference to the courtyard, only to the structure's orientation. In this respect, then, the *calli* could still be identified in relation to the unmentioned courtyard, with Lockhart arriving at a definition of the term as suggesting "a building destined for human residence (with) an independent doorway onto a patio"[8]—in other words, a building that never exists in isolation.

Continuing the etymological tracing, in the same way that *calli* signifies a physical structure that is part of a larger compound, so the term is often used in conjunction with other root words in order to signify a type of "house" that belongs to a greater whole. This is clear in terms such as *calalli* (the land of the house), *tlacochcalli* (a room of rest), *cihuacalli* (a house of women), *huehuecalli* (a patrimonial house), *huey calli* (a grand house), *telpochcalli* (a house of young [men]), *tecpancalli* (a royal house or palace), *tepancalli* (an enclosure or compound), *tlapancalli* (a house with a roof?), *tlatlatilcalli* (a storehouse), and *xacalli*, which is often Hispanicised to *jacal* (a self-built house or hut). These examples demonstrate that there is something of a generic quality to the term *calli*, meaning that it must be more specifically defined with another term. To a certain extent, *calli* is interchangeable with the term for a house, but only insofar as a house is understood as a space for human residence that is part of a larger complex. Significantly, *calli* never signifies the modern understanding of a house as a residential space for a family.

Indeed, the notion of family is complex in Nahua tradition: on the one hand, blood and kinship ties are integral to the ordering of Nahua society,[9] but, on the other hand, the understanding of the family as a social unit is far removed from the way in which the Nahuas organised their social and political life. Even the understanding of an extended family unit does not relate to the types of family relations that the Nahuas considered, because this assumes a single (however large) group of individuals with consanguineal ties who are identifiable as a single unit. By contrast, there was an emphasis on relationships in Nahua cultures, but only so far as to designated individuals living together in one place. Ultimately, though, these relationships could be determined only by reference to the individual in question—one's mother or one's father, for instance, but never one's family.

Lockhart proposes the household as the "effective minimum unit in Nahua society,"[10] as a result of closely reading the words that signify those people who live together in a place and the relationship between them. Here, the presence of "house" confirms the physical common ground that is shared in domestic space, there being more flexibility in the meaning of "household" than in the idea of "family." Indeed, the term "household" signifies not only a structure but also the individuals who live within such a structure. As such, a Nahua household cannot but be bound up with a physical complex. Indeed, one only has to look at the terms in the famed dictionary by Fray Alonso de Molina from 1585[11], used to approximate the translation of the Spanish *familia* into Nahuatl, including such various terms as *cenyeliztli* ("being together" or "people who live together in a house"), *cencalli* ("one house"), *cencaltin* ("those in one house"), *cemihualtin* ("those in one courtyard"), and *techan tlaca* ("people in someone's home"). Lockhart similarly observes that many people live together in a single setting, also using the term "household" to describe the specific relationship between place and people.[12]

Place, residence, and relations are fundamentally inseparable in the Nahua social order. This is clearly illustrated in Fig. 1. Looking closely, it is possible to identify the individual *calli*, with the heads of those who inhabit them being joined by a rope (*mecatl*) indicating their relation. It was clearly not possible to represent the complex graphically by means of the various buildings or the central courtyard. Indeed, it is important to note that this Nahua representation dates from the early seventeenth century, so it already reflects associations by marriage under the Catholic Church. Even so, the artist's insistence on graphically delineating the relation between the individuals is likely to be a legacy of pre-contact tradition.
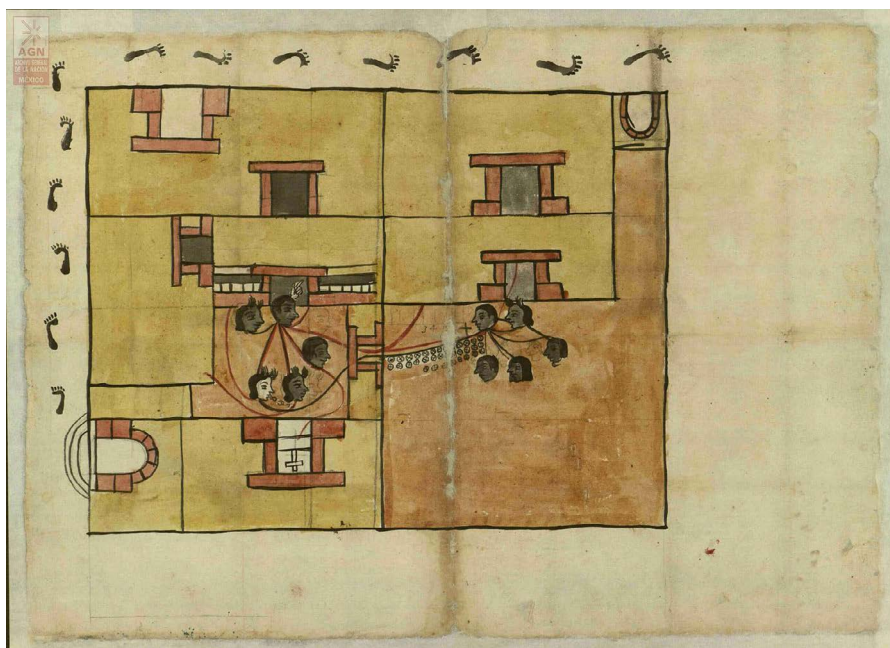
Fig. 1

4. Land redistribution by European Crown decree

Typified by clusters of houses defining neighbourhoods, this form of Nahua social and political organisation has endured from its beginnings during the sixteenth century, when the new colonial order was imposed by the Spanish Crown. Key to this was the land at the centre of Tenochtitlan being redistributed, for the exclusive use of the Spanish elite. This resulted in the consolidation of the *traza*, or urban plan, with the previously gridded subdivisions of causeways being turned into streets with buildings displaying European characteristics. Indeed, the *traza* was mainly used to regularise the land plots for the new *avecindados* (citizens or neighbours of elite Spanish origin), measuring approximately 42 m x 42 m. As such, the new European order was established via land titles and the recording of ownership. In the hierarchy of value, then, the subdivision of the land within the *traza* was now being prioritised over the forms of social organisation that structured the political relations in the earlier Tenochtitlan.

All manner of land grants and disputes are recorded in the *Tierras* section of the Mexican national archives. These date back to the early sixteenth century, with land grants being recorded in the first *Acta del Cabildo* (council meeting) in March 1524, only a few years after the Spanish defeat of the Mexica emperor in 1521. These meetings—whose main purpose was to record and administer the affairs of landed citizens—greatly influenced the redistribution of the land of the Mexica city.[13] The plots were initially granted in their original dimensions of 42 m x 42 m, but many were subdivided over time, on more than one occasion. Nonetheless, the overall footprint of the city's urban plan remained largely unchanged during the colonial period. Much of the land stayed in the same hands, even though many of the buildings on this land were reconstructed, especially during the eighteenth century, in the last half century of the viceroyalty. Aristocrats accumulated property over time—in the city as well as in nearby towns, where they were granted *encomiendas* or established *mayorazgos*.[14] Although they usually resided at larger estates outside the city, they often also maintained official residences in the city, so the population also included this servant entourage, comprising European citizens of lower classes as well as many indigenous citizens.

Juan Gutierrez Altamirano was one such aristocrat: Governor of Cuba by royal decree from 1524, he travelled to Mexico in 1527 and was granted land in the city for his main residence in 1531. In addition, he was also granted an *encomienda* with a *mayorazgo* outside the city, which accompanied the mayoralty of Texcoco. His descendants inherited the royal title of Count of Santiago de Calimaya, with the family's residence being rebuilt on its original site in 1774. There is no known record of the first house that was built in the sixteenth century, but one appears in Arrieta's map from 1739, in Fig. 2. The complete block is dominated by two-storey buildings and a total of seven courtyards, which most likely corresponded to the subdivision of the block, possibly coinciding with the individual property titles that constituted the block.[15] The house of Gutierrez Altamirano occupied the southwest plot, which is divided into two courtyards. The later house of 1774 followed the same configuration, with two courtyards being included on the same (likely unaltered) plot.

Fig. 2

At first glance, then, it can be assumed that the distribution of the city has remained fundamentally unchanged since 1521, owing to the size and shape of the urban plan remaining constant until the middle of the 1850s at least. Even so, within the limits of their plots, these buildings with courtyards enabled a form of occupation that recalls an earlier form of dwelling by the Mexica before the arrival of the Europeans. The house of the Counts of Santiago is a case in point, being one of many examples where people from different classes pursued their livelihoods around a central organising space, thereby countering the individualistic order that was dictated by the regularity of the European grid.

Indeed, at 42 m x 70 m, the plot of this property is larger than the average 42 m x 42 m, occupying almost two average plots,[16] with the subdivision into two parts and two courtyards likely following from this morphology. The functions of the earlier sixteenth-century building remain unknown, but the Count made the most of the later building's subdivision by eventually deriving rental income,[17] using the larger wing for his own residence, and the smaller wing as a separate residence for servants or staff at the service of the Count's family. This side of the property, with the smaller courtyard, eventually became a *casa de vecindad*.
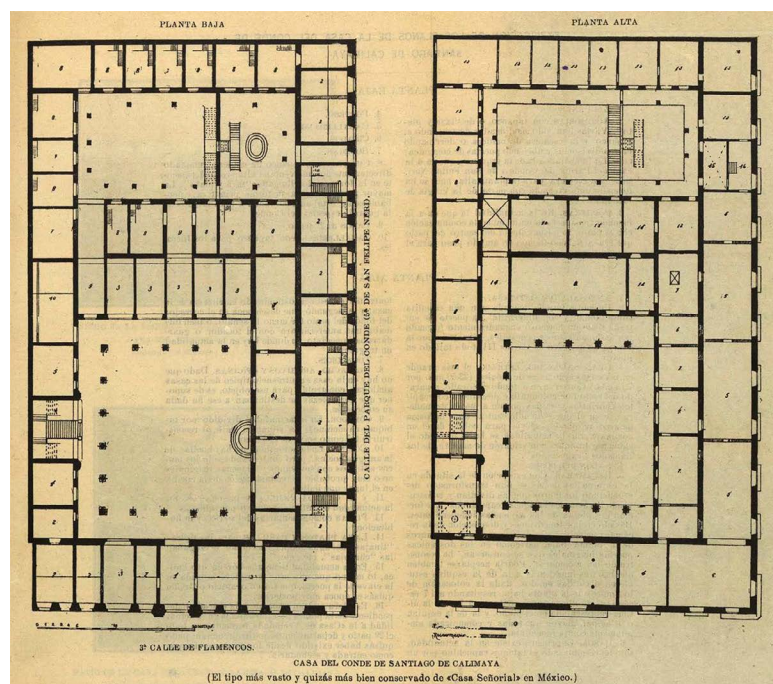
Fig. 3

Furthermore, the Count's private residence was not only occupied by aristocrats, but also hosted a court of servants. Following the European fashion, the Count's residence occupied the upper levels of the building, while the ground floor accommodated the household servants, the dimensions of the rooms on the ground level being smaller than those on the upper level. The internal rooms facing the courtyard were used for utilitarian purposes, such as garages, stables for horses, and storage, because the main doorway from the street allowed carriages to access the courtyard. The two-storey units facing the street, meanwhile, were self-contained, being independent from the main house. These were rented out as workshop spaces where craftspeople lived and worked.

The more compact side of the plot, with its multiple rooms on the ground and first floors, allowed a shared domesticity amongst a number of additional residents—who did not need to be related to one another by family ties, nor by any other form of kin relation. The central courtyard was where domestic activities were shared, including those relating to the use of water—personal hygiene, most obviously, but also the cleaning of other things, too. Indeed, the floor plans from Federico Mariscal's 1915 study show that the courtyard also included a central fountain and a central staircase.[18] Moreover, the main entrance to this wing from the street to the courtyard is much narrower, with no access for carriages or horses. The modest organisation of rooms around a courtyard would later facilitate the rental of independent rooms to a mix of individuals and households, in a similar fashion to the family's other *casas de vecindad*. As such, the building provides an example of purpose-built domestic accommodation where self-contained rooms that depend on a central courtyard are individually valued. The residents who inhabited these rooms for generations—many of whom would have had mixed indigenous backgrounds—brought their own domestic traditions and practices into these Europeanised rooms and courtyards: not only did they eat and sleep in them, but their domestic activities also spread into the courtyard, as did their religious activities, too, in the erecting of altars and communal celebration of feasts.

5. Cultural recognition despite land subdivision

Casas de vecindad, like those built by the Counts of Santiago, eventually became the main kind of domestic accommodation for the growing population of Mexico City during the following two centuries. They constituted a double-edged sword in relation to the distribution of the city's resources and those with rights to those resources. On the register, for instance, the underlying land belonged to those who had purchased or inherited the plots as they were initially delineated in the *traza* from the sixteenth century, despite the subsequent subdivisions. Even so, the morphology of the city has remained constant since then: when the Crown implemented reforms to individualise property titles, for instance, thereby disregarding the corporate property that was mainly owned by monastic orders, the embryonic bourgeoisie were able to reappropriate the city in order to generate revenue for themselves. The nobility were able to use their inherited wealth and power to become an emerging liberal class, by adapting to the emerging market economy that had started to use the building of domestic spaces as a speculative practice for the appreciation of land value.

The typological structure of these domestic premises—rooms around a courtyard, in a hybrid of European and Mesoamerican living traditions—played a significant part in the success of this approach.[19] Even so, the persistence of this typology was also the reason why indigenous groups and the *mestizo* class resisted their exclusion from this part of the city. This was especially evident following a political reform that was introduced in the decades after Mexican independence (1821), whereby noble titles, the aristocracy more generally, and the church were suppressed by the new liberal classes.[20]

At the same time, the physical limits of the city expanded in the 1850s. The neighbourhoods outside the city centre, which had long been populated by indigenous groups, were developed into standardised districts, creating new areas for wealthy people to inhabit. But even though many of the elites moved away from the city's centre, many others remained as landowners, renting properties within the old *traza*. As a result, the old aristocratic houses, convents, colleges, hospitals, and hospices, which followed the typological structure of rooms built around courtyards, were adapted into new kinds of *vecindades*, providing collectivised dwellings for the city's workers and merchants.

One such case was the Beatario de la Covadonga, illustrated in Fig. 4. Located to the northwest of the old *traza*, this building displays similarities with the house of the Counts of Santiago, being a reconstruction of an original from the seventeenth century.[21] The new building was designed as a college for Spanish girls: they were to be educated and live within a religious building, prior to marrying or entering a convent. Like the house of the Counts of Santiago, the overall complex was divided into two, although there were two separate plots of land from the outset: the complex featured not only cloisters for the girls, but also a communal kitchen and dining spaces, a common garden in the main (largest) courtyard, with a chicken coop and pantries, as well as an oratory and a chapel.
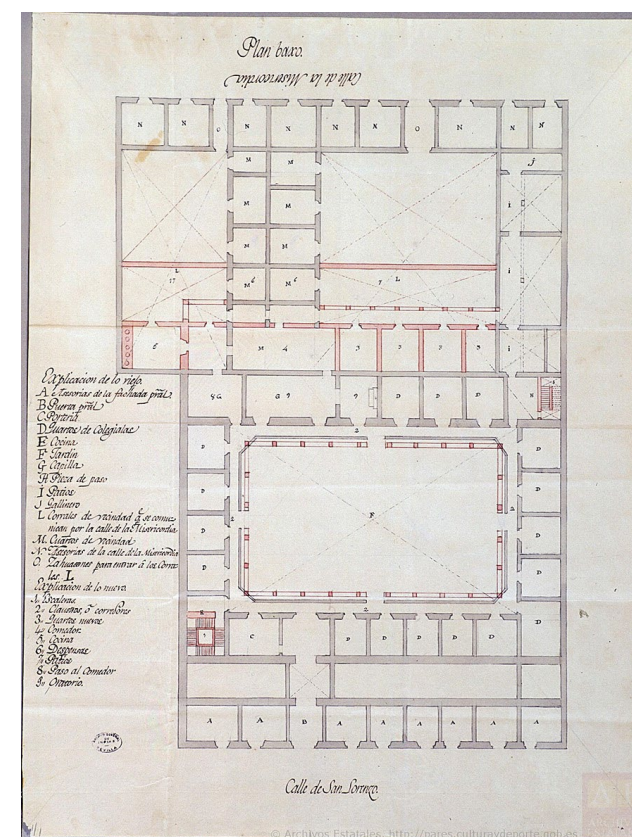
Fig. 4

Indeed, the floor plans from 1789 show that the collective spaces for the girls are located to the south of the complex. To the north are rooms constituting a *casa de vecindad*, with two courtyards smaller than the main one serving the cloisters. In addition, the *vecindad* rooms are accessible only from the street and there are no points of connection from them to the main facilities of the college.

The living arrangements shown in this plan appear to be similar to those in the house of the Counts of Santiago, with an elite group living on one side and people renting the buildings living on the other. However, we now know that the college never functioned in this way, since it was not economically successful, while the renting of rooms did not contribute any substantial revenue. This resulted in the premises being sold and its use maintained exclusively as a *vecindad*, which, having been renovated, still exists today.[27]

The difficulty in maintaining colonial buildings also caused landowners to speculate on land values beyond the original *traza*. As such, the early twentieth century saw much of the old city's urban fabric fall into disrepair. Investments elsewhere were more pragmatic, especially those relating to the provision of mass housing for the increasing immigrant population looking for work opportunities. As a result, new purpose-built *vecindades* were built in neighbourhoods outside the city centre, with more compact dimensions than their colonial precedents.[22] Nonetheless, the colonial buildings in the city centre continued to be used as domestic spaces, as the combination of rooms around a courtyard opened up possibilities for a varied and changing population—sometimes individuals were looking for opportunities in the city, for instance, while families often rented rooms from generation to generation. The rents of these rooms were more affordable, too, even if the buildings had often fallen into disrepair.

The Beatario de la Covadonga exemplifies the continuing importance of *vecindades* in the old part of the city throughout the twentieth century. Its architecture was often changed, with rooms being added by residents, increasing residential density while eating into the communal space of the courtyards. The role of the courtyard was therefore put under significant pressure, with the residents living in extreme proximity. On the one hand, this increased problems with hygiene, as modern utilities such as water and electricity were difficult to incorporate within old constructions. On the other hand, though, the *vecindad* courtyards remained a centre of domestic life, with residents finding solidarity in the redistribution of their precarious belongings and internal economies emerging from the close relationships that the residents forged.

As ever, the courtyards continued to host a wide range of functions, including those relating to domestic life. By the nineteenth and twentieth centuries, casas de vecindad became the most popular form of housing for the poor in Mexico City, labelled centres of squalor and lack of hygiene. At the same time, their patios (romanticised or not) became the central characters within artistic depictions, anthropological studies, and in cinema.[23] More recently, these spaces are increasingly undergoing gentrification, if not demolition. For those vecindades that still exist today, far from romanticising them, it is evident that they survive with little or no support from private landlords, nor from the state which has designated them as monuments, but from the strength of the relationships between residents. The architectural type–its organisation–reinforces this, as well as an attitude to the overall complex encompassing more than the individual room. Perhaps owing to Nahua legacy, this resistance hinges on the corporate relationships of those living together. However, instead of forming part of a larger ideology that foreground groups and alliances, vecindades and their residents today stand on their own continuing to deny the private to fully prevail.

6. Conclusion

Today, the redistribution of land is held hostage to a market order. However, Fraser's understanding of the relations between "redistribution" and "recognition," as well as "representation," encourages a discourse in which the redistribution of land is not only a quantitative exercise, but also an active practice that harnesses the power of cultural tradition or ritual.

This paper does not argue that there is a "right" action—whether redistribution, recognition, or representation—to pursue justice in cultural, socioeconomic, and political dimensions.[24] Rather, it explores some built and lived examples that not only validate these various actions, but also push them beyond their ontological limitations.[25]

This paper also highlights crossovers between maldistribution and misrecognition within a pre-capitalist context—that is, within the intertwined social and economic order of the Mexica—and its later separation into distinct social, cultural, and economic spheres in the era of capitalism. Even so, the process has actually been more subtle: not only was the redistribution of land that occurred in Mexico fundamentally shaped by the pre-existing Mexica social and political organisation, but that organisation has continued to be an influence through the periods of colonialism and then capitalism, maintaining the sharing of resources, specifically land, for domestic use. This form of sharing combines pragmatism with social, cultural, and political dimensions and it continues, to a certain extent, within the domestic spaces of the colonial and capitalist *vecindades*. Nonetheless, the preference for a market economy has ultimately

resulted in the integrated social, cultural, and political dimensions of Nahua ideology being separated into individual strands. Most evidently, the *vecindades* have been individuated as lots of private property that generate rents for the elite, with the result that the communal participation of the groups of residents inhabiting these domestic complexes can no longer influence wider neighbourhoods in the same way— or at least only in a much more limited and restricted way, as a form of struggle against the market pressures of the twentieth and twenty-first centuries.[26]

Following Fraser, then, I hereby introduce a historically situated view of redistribution, which exists in the context of the Mexica social and political organisation of the past as well as the overwhelming capitalist structures of today. Indeed, the Nahua tradition—albeit diffused and transformed—is still present within the capitalist system, where it continues to act as a form of resistance to capitalism itself.[27]

Notes

1. In the Mexican context, a *vecindad*, or *casa de vecindad*, describes a building type where a central courtyard or internal street orchestrates rooms around its perimeter. These rooms are mostly used for residential accommodation, but this is not always the case. The rooms do not have a specific layout, either; they tend to be without internal partitions and are adapted by residents on an ad hoc basis. The rooms in vecindades have had innumerable functions throughout history: as workshops, warehouses, synagogues, communal kitchens, and all types of workspaces.

2. Nancy Fraser, *Adding Insult to Injury: Nancy Fraser Debates Her Critics*, ed. Kevin Olson (London: Verso Books, 2008). The book considers much of Fraser's theoretical development of the terms redistribution and recognition. For an introduction of both terms and their relationship, see the chapter "From Redistribution to Recognition? Dilemmas of Justice in a 'Postsocialist' Age", 9–41.

3. I use the terms "type" and "typology" as means to re-read the history and topography of the city following Aldo Rossi's seminal work in The Architecture of the City. The paper invites a critical reflection upon this and Rossi's contemporaries, Anthony Vidler and Rafael Moneo theories on typology, considering the term as a category containing tensions of permanence and transformation. Aldo Rossi, *The Architecture of the City*, New Ed edition (Cambridge, Mass.: MIT Press, 1984). Rafael Moneo, "On Typology", *Oppositions*, no. 13 (1 January 1978): 23–45. Anthony Vidler, *The Third Typology and Other Essays* (Actarbirkhauser, 2017).

4. See the chapter "Prioritizing Justice as Participatory Parity: A Reply to Kompridis and Forst," in *Adding Insult to Injury*, 327–346 (333): "It follows, to paraphrase John Rawls, that critical theorists should regard justice as the first virtue of recognition—where 'first' means not necessarily the highest virtue but the one that secures the enabling conditions for all of the others."

5. In Fraser's words, "Which approach is better positioned to put first things first in the sense of exposing unjust asymmetries of power?" (Fraser, "Prioritizing Justice," in *Adding Insult to Injury*, 340).

6. Nancy Fraser, "From Redistribution to Recognition? Dilemmas of Justice in a "Postsocialist" Age", in *Adding Insult to Injury*, 9–41.

7. Alejandro Alcántara Gallegos, "Los Barrios de Tenochtitlan: Topografía, Organización Interna y Tipología de sus Predios", in *Historia de la vida cotidiana en México: tomo I. Mesoamérica y los ámbitos indígenas de la Nueva España,* ed. Pablo Escalante Gonzalbo (México: El Colegio de México: Fondo de Cultura Ecónomica, 2004),167–198.

8. James Lockhart, *The Nahuas After the Conquest: A Social and Cultural History of the Indians of Central Mexico, Sixteenth Through Eighteenth Centuries* (Redwood City, CA: Stanford University Press, 1992), 61.

9. The study by María Castañeda de la Paz of divine lineage outlines the complexity of the kinship and non-sanguineal ties that play a role in integrating the Tenochca royal house. Although familial relationships are important, these are not understood as such, especially as the notion of family did not exist in Nahua ideology. See María Castañeda de la Paz, "Historia de una Casa Real. Origen y ocaso del linaje gobernante en México-Tenochtitlan," *Nuevo Mundo Mundos Nuevos*, no. 11 (2011). See also note 12, below.

10. Lockhart, *The Nahuas*, 72.

11. Alonso de Molina, *Vocabulario de lengua Castellana y Mexicana y Mexicana y Castellana* (México: Porrúa, 1992).

12. Interestingly, there is no equivalent for the English *household* in Spanish. The dictionary translations return to the term *casa*, and *familia*. Another translation term is *menaje* (menage), which describes everything within a house, in terms of the relationships between objects and place, but not people.

13. Lucía Mier y Terán Rocha investigates the impact of the first Actas del Cabildo on the subdivision of land that was implemented by Cortés after the war and the substantial destruction of Tenochtitlan in 1521. These documents made official the new urban plan and constituted records of land grants and the criteria under which they were allocated. Lucía Mier y Terán Rocha, *La Primera Traza de la Ciudad de México 1524–1535* (México: FCE, Universidad Autónoma Metropolitana, 2005).

14. *Mayorazgos* and *encomiendas* were forms of land ownership that were granted to Spanish elites during the early colonial period, which included landed estates and, in the case of *encomiendas*, the right to claim tributes and labour from the indigenous towns that were designated as such.

15. In the map of Ana Rita Valero de García Lascurain, which indicates the subdivision of urban blocks into plots, the plot where the Count of Calimaya's house sits is the largest of the nine plots into which the urban block in question has been subdivided. Ana Rita Valero de García Lascuraín, *La Ciudad de México-Tenochtitlan (1524–1534) Su Primera Traza* (México: Jus, 1991), foldable map enclosed within book cover.

16. Valero's map shows that this has been the case since the original subdivision in 1524 (Valero, *La Ciudad*).

17. At the same time at which the Count was re-building his private house, he also commissioned the rebuilding of several other buildings he owned in the vicinity. At least four of these buildings would become purpose-built vecindades. One of them was located adjacent to his private house, while three others were only one block to the west, all next to each other and built to the same design. See Ignacio González Polo, *El Palacio de los condes de Santiago de Calimaya* (Ciudad de México: UNAM, 1973) 38–40. To derive rent from residential premises was a practice that the church as an institution had exercised from the early colonial period. By the mid-eighteenth century, however, the new Bourbon dynasty had worked to dismantle monastic orders into secular orders, which until then had allowed corporate church and indigenous groups to hold land in common. The Bourbon reforms secularised land ownership, among other policies, opening opportunities for rich individuals to acquire land from which they could make an income, passing a direct tax to the Crown. See Matthew O'Hara, *A Flock Divided: Race Religion and Politics in Mexico 1749–1857* (Durham, NC: Duke University Press, 2010).

18. The drawing shows the central staircase and fountain, both of which have now been removed in the current use of the property as the Museo de la Ciudad de México. See Ignacio Gonzalez Polo, *El Palacio de los condes de Santiago de Calimaya* (Ciudad de México: UNAM, 1973).

19. Lockhart's work repeatedly attests to the parallels between the Nahua and Spanish forms of social organisation, which, owing to their apparent similarities, were more easily hybridised, and which had repeatedly worked to the detriment of the indigenous classes, enabling further subjugation. See Lockhart, *The Nahuas*, and *Beyond the Codices: The Nahua View of Colonial Mexico*, ed. and trans. Arthur J. O. Anderson, Frances Berdan, and James Lockhart (Berkeley: University of California Press, 1976).

20. The Reform Laws (Leyes de Reforma) of 1856 worked to delegitimise the power of the church and noble institutions through policymaking.

21. Alicia Bazarte Martínez et al., "Colegio de Nuestra Señora de Covadonga, Ciudad de México: Siglos XVIII al XX. Historia de una Institución Escolar que Quedó en Intento," *Boletín De Monumentos Históricos*, no. 43 (May–August 2018), 93.

22. See Caroline McMichael Reese, "The Urban Development of Mexico City, 1850–1930," in *Planning Latin America's Capital Cities, 1850–1950*, ed. Arturo Almandoz (London: Routledge, 2009), 139–169.

23. Various accounts document the relevance of the *vecindades* of the city centre during the twentieth century. Among them, most notably, are the studies of anthropologist Oscar Lewis, as well as his literary bibliography of a working-class family's life in a *vecindad*, plus the innumerable films from the Mexican golden age that take place on the patios of *vecindades*. See Oscar Lewis, *The Children of Sánchez: Autobiography of a Mexican Family* (New York: Random House, 1961) and *Five Families: A Mexican Case Study in the Culture of Poverty* (New York: Basic Books, 1959).

24. Fraser writes that "struggles against misrepresentation cannot succeed unless they are joined with struggles against maldistribution and misrecognition—and vice versa. Where one puts the emphasis, of course, is a both a tactical and strategic decision. Given the current salience of injustices of misframing, my own preference is for the slogan 'No redistribution or recognition without representation.' But that priority is conjunctural, not conceptual. And even today the politics of representation appears as one among three interconnected fronts in the struggle for social justice in a globalizing world" ("Prioritizing Justice," 343).

25. Fraser also writes that "recognition's meanings continue to unfold historically in novel and unpredictable ways; thus, they cannot be definitively enumerated once and for all" ("Prioritizing Justice," 331). Following this line of thinking, there is perhaps a case for finding the development of this discourse not only within an unfolding future, but also within misrepresented and marginalised histories.

26. Fraser writes elsewhere that "In pre-capitalist, pre-state societies, for example, where status simply is the overarching principle of distribution, and where the status order and the class hierarchy are therefore fused, misrecognition simply entails maldistribution" ("Heterosexism, Misrecognition, and Capitalism: A Response to Judith Butler," in *Adding Insult to Injury*, 57–68 (63–64).

27. Elsewhere in "Heterosexism, Misrecognition, and Capitalism," Fraser writes that "What gets lost is the specificity of capitalist society as a distinctive and highly peculiar form of social organisation. This organisation creates an order of specialised economic relations that are relatively decoupled from relations of kinship and political authority […] Both Mauss and Levi-Strauss analysed processes of exchange in pre-state, pre-capitalist societies, where the master idiom of social relations was kinship. In their accounts, kinship organised not only marriage and sexual relations, but also the labour process and the distribution of goods; relations of authority, reciprocity, and obligation; and symbolic hierarchies of status and prestige. Neither distinctively economic relations nor distinctively cultural relations existed; hence the economic/cultural distinction was presumably not available to the members of those societies" (63, 66).

Image Captions

Fig. 1 Unkown author, *Plano de una casa en Xochimilco*, Plan dated 1653, Archivo General de la Nación, Mexico City.
Fig. 2 Pedro de Arrieta et al., *Plano of Mexico City*, 1737. The map indicates North on the left. Bottom left-hand (NW) indicates the urban block that contains the Beatario de la Covadonga–across the block reads the glyph "La Misericordia". Top right (SE) indicates urban block with house of Counts of Santiago de Calimaya– the block sits across the street–to the left (S)–of Valvanera and Portaceli. The whole block contains seven interior courtyards.
Fig. 3 Casa Conde de Santiago de Calimaya, lower level floor plan (left), upper level floor plan (right). Drawn by Federico Mariscal in *La Patria y la Arquitectura Nacional*, 18.
Fig. 4 Beatario de la Covadonga, lower level floor plan, 1789. Archivo General de Indias, MP-México, 650.

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Biography

Lola Lozano Lara is an architect and PhD researcher at the Architectural Association in London, UK. Her doctoral thesis investigates the notion of proximity and redistribution of domestic space in Mexico City, through a typological framework. The thesis traces the genealogy of vecindades through the pre- and post- colonial situated histories of Mexico, and the relevance of traditional legacy and agency in changing political contexts. Alongside this research, Lola is director of design and research platform Forms of Living investigating the relation between life and form as expressed in architecture, the city, and the landscape. Lola is design fellow the University of Cambridge and has taught architectural design and history and theory across various UK universities.

Mannerism as a Critical Tool
Projecting the VSBA Method into the Future

Malfona, Lina
University of Pisa, DESTeC, Polit(t)ico Research Lab, Pisa, Italy, lina.malfona@unipi.it

Abstract

Giorgio Vasari used the term '*maniera*' to describe the peculiar style of an author. But along with style, the *maniera* bears with it all the author's manias, obsessions and prejudices. Roberto Longhi described 16th century mannerists as usually moody, temperamental, often introverted. The adjectives of biographers were almost always the same: wild, strange, suspicious, melancholic, lonely. The term mannerism was coined in the 17th century in a denigrating form and is still used to identify the *maniera* of those artists who refer to a school, the typical pupils who grew up in a prominent master's workshop. But the imitation of the masters is not passive copying but creative interpreting, which paves the way to variation, to exaggeration but also to in-depth analysis and overturning, and even to what today we would call deconstruction.
Robert Venturi conceived mannerism as a kind of impatience with regulatory apparatuses and conventions, a tendency towards challenging the rules of the game, practiced by those who know those rules all too well. Prominent architects and intellectuals, Robert Venturi and Denise Scott Brown have proclaimed their belief in mannerism as a method. In order to pursue an in-depth analysis in the folds of authorship, their work will be scrutinized as an exemplary case of the manifestation, acme and overcoming of mannerism, from *Complexity and Contradiction in Architecture* (1966) to *Architecture as Signs and Systems. For a Mannerist Time* (2004) going through *Learning from Las Vegas* (1972). VSBA believed that mannerism had an evolutionary character and that it could also point to a specific direction for the age of multiculturalism, where complexities and contradictions are no longer just a matter of form. After unfolding mannerism as a method, it will be possible to project this supra-historical category into the future and use it as a critical tool.

Key words: Architecture, Authorship, Mannerism, Sign, Deconstruction.

1. Architecture as Sign. Mannerism according to VSBA

In 1979, Jean-François Lyotard theorized the *postmodern condition*, which was conceived in architecture as an expressive condition based on the aesthetics of play and entertainment, on the fall of modernist instances and their replacement by what Samuel Taylor Coleridge called 'fancy' and Friedrich Shiller 'aesthetic play.'[1] It was an aspiration towards a rift with closed, canonical and repressive linguistic systems, which were countered by what Fredric Jameson had defined as the "disalienating excitement of the new and the 'unknown' (the last word of Lyotard's text), as well as of adventure, the refusal of conformity, and the heterogeneities of desire."[2] Similarly, postmodernism in architecture developed from a constructive deformation of the principles of the Modern Movement. Among the leading theorists of postmodernism, the architects and academics Robert Venturi and Denise Scott Brown (VSBA) worked incessantly on the deformation of the canon and the aesthetics of intellectual play. However, these two designers have always refused to be called postmodernists, proclaiming their belief in mannerism as a method.

The artistic and intellectual journey of this duo can be read as an exemplary case of the manifestation, acme and overcoming of the mannerist condition. Initially, the direct study of mannerism during his stay at the American Academy in Rome (AAR) strongly influenced Robert Venturi's intellectual approach, as well as the writing of his book, *Complexity and Contradiction in Architecture* (1966).[3] At the tail end of a book that was a design guide to the use of history rather than a historical essay, Venturi included the early buildings he designed with Denise Scott Brown, which had a mannerist tone. In this book, Venturi spoke of himself "as an architect rather than a scholar" and "as an architect who employs criticism rather than a critic who chooses architecture", writing "an apologia–an explanation, indirectly, of my work".[4] The reading of history from a design perspective allowed Venturi to inaugurate the successful season of architect-analysts, of which Rem Koolhaas is the direct progeny.

While the book *Complexity and Contradiction in Architecture* marked the mannerist phase of Venturi's production, the book *Architecture as Signs and Systems. For a Mannerist Time* (2004) bears witness to the long-lasting nature of this influence, even in the postmodern climate.[5] Probably the overcoming of mannerism was never accomplished on the level of form, since an intellectualistic and academic vein always pervaded VSBA's projects. However, it is on the historical-critical level that this overcoming can be fully recognized, specifically in the methodological approach of the book *Learning from Las Vegas. The Forgotten Symbolism of Architectural Form (*1972), through which VSBA introduced a new vision and new tools for analyzing urban and suburban reality, influencing entire generations of architects. Although Robert Venturi had the undisputed merit of rediscovering, understanding, spreading, and reinterpreting mannerism, it was the Venturi Scott Brown duo who expressed the conviction and daring to use this condition as a method of investigation, and ultimately overcome it.

Robert Venturi was a great admirer of the works of historical mannerism, as they embodied his idea of formal complexity and contradiction, and thus he exonerated mannerism from many of the accusations that had been levelled at this tendency: for him, mannerism is not convoluted, excessive, ideological, picturesque, mannered and ostentatious.[6] Although the cyclical aspect of mannerism had already been grasped by numerous historians and critics, Venturi continues in this direction, but goes much further, so far as to use mannerism in a paroxysmal way to explain multiculturalism and the role of communication in the architecture of today and tomorrow, electronic iconography and even certain urban phenomena, such as the city of Tokyo. The Japanese capital is seen as the city of juxtaposition rather than of conventional order, the city that assembles rural sanctuaries and globalization headquarters. In a kind of ecstatic, convulsive frenzy for electronic media and mannerist themes, Venturi exclaims: "*Viva* the façade as computer screen! *Viva* façades not reflecting light but emanating light—the building as a digital sparkling source of information, not as an abstract glowing source of light!"[7] Certainly, it is difficult to distance oneself from the riot of sparkling images offered by the emerging hyper-technological culture, which beguiled Venturi to the point of pushing him to venture into intemperate parallelisms, such as that between Times Square and St. Mark's Square... However, in the project for the Sainsbury Wing at the National Gallery in London, a jazzy and dissonant work as the author himself defines it, Venturi and Scott Brown return to the figurative themes of mannerism, momentarily disengaging themselves from the postmodern excitement for the information era. For the Sainsbury Wing, VSBA experiment with an ingenious *decorated shed* style, which is the result of a successful compromise between the need to create a monumental backdrop, in keeping with Trafalgar Square, and the desire to produce a dissonant device, characterized by a pressing rhythm, where the giant order of pilasters (*macho pilasters*), blind windows and large holes abruptly interrupt the continuity of the front. Venturi himself writes: "Here is a building in its context that is not historical-revival, not Postmodern, not Neomodern. It is an urban mannerist billboard!"[8]
Venturi's thesis is that there is a twenty-first-century mannerism reacting to the modern movement, as there was a mannerism in the sixteenth century that reacted to the Renaissance. This new mannerism

that accommodates the complexities, contradictions and ambiguities of the information age can be called "Architecture as Sign."[9] However, the new mannerism theorized by Venturi has faint relations with historical mannerism, which was characterized by a graceful, refined style. Historical mannerism is set up against *mannerist postmodernism*, that of intellectualistic games, logical contradictions and formal excesses, examples of which can be found in the works of Frank Furness, Armando Brasini and John Soane.

According to Denise Scott Brown, Robert Venturi conceived mannerism as a disciplined breaking of rules, a kind of impatience with regulatory apparatuses and conventions, a tendency towards challenging the rules of the game, practiced by those who know those rules all too well. To this idea of mannerism, Scott Brown added a subtle motivation: rules must necessarily be broken, because it is not possible to follow them all the time.[10] In a more rational and analytical vein, together with a more lashing critical attitude than Venturi's, Scott Brown argues that mannerist trapeze artists transform themselves from masters of order into masters in overcoming order, either in search of new vigor or merely for pleasure.[11] Along the same lines as Venturi, Scott Brown analyzes some mannerist trends closer to our own time, including Deconstructivism, and through her critique of this artistic trend – which she defines as mannered rather than mannerist, because it only breaks the rules for aesthetic reasons – she brings to light a more inclusive line of thought than Venturi's. Moreover, Scott Brown shifts mannerism as a method to the urban level, using the category of friction to explain the juxtaposition of the various layers of the city and the natural, physical and social environments that make up human space. Through Scott Brown's interpretation, mannerism is no longer understood solely as a movement that is predominantly formal or based on aesthetic paradigms. This artistic trend appeals to a much broader audience interested in the social, political, economic, and communicative implications of architecture. The VSBA duo can be said to have contributed to expanding both the national and theoretical boundaries of mannerism, exposing this artistic condition to a broader and more international interpretation.

But what are the themes and terms of the mannerism that VSBA make their own? How far does their interpretation depart from historical mannerism? In the Vanna Venturi (1959–1964) and the Guild House (1960–1963) – the former a single-family house and the latter a collective house – we can observe the shift from classical mannerism to postmodernist mannerism. In both these projects, the façades induce a second level of interpretation, which is concealed behind the seeming oversimplification of the architectural artefact. One can look at these works as if they were, first and foremost, large textual and linguistic apparatuses, or communication devices.[12] But if the Vanna Venturi House is an artificial, allusive and vaguely mannerist construction – Venturi himself writes: "Maybe Mother's House should be known as Mannerist House" –, Guild House is a construction in which enigma gives way to humor.[13] If, in the former case, the challenging of conventions generates ambiguity, in the latter it provokes laughter. The Guild House captures, indeed, the rise of postmodernism in VSBA's research, but how can an "ugly and ordinary" building ultimately be considered a mannerist work?[14] In this case, the mannerist insistence on the façade is transformed into its impoverishment, in the creation of an artificial surface, a 'decorated shed'. The entire building would appear to be a citation of a sixteenth-century Italian *palazzo* with a tripartite façade, but the tripartition is only superficial, not volumetric. The inclusion of symmetrical elements in the façade, such as the historicist lunette on the top floor, the application of redundant elements such as the sign, the use of out-of-scale objects such as the guillotine windows, and the employment of repulsive components such as the gigantic column placed on the ground floor (supporting the very thin wall that reaches up to the roof) are in no way similar to Giulio Romano's refined changes of scale, but rather appear as a pure act of desecration.

However, the most problematic issue in the thinking of Venturi and Scott Brown is the antagonism they establish between mannerism and expressionism. A comparison between Guild House and Paul Rudolph's Crawford Manor apartment building – as proposed by VSBA in their book *Learning from Las Vegas* – reveals two different sides of mannerism: one postmodernist, the other expressionist. The opposition between the expressiveness, dramatic quality, and formal articulation of Paul Rudolph's Crawford Manor on the one hand, and the decorative and iconographic surface aesthetics of their Guild House on the other, appears as a crucial argument for explaining what mannerism is for VSBA. For Arnold Hauser, expressionism is one of the artistic movements that descend directly from mannerism due to its revolutionary instinct, dramatic tension, and communicative intentions. But Venturi does not share this view. In fact, in one of his reasonings explained through lists of oppositional pairs, he writes: "we're not ashamed to design buildings that look like buildings – that are: [...] mannerist rather than expressionist; [...] symbolic rather than formal."[15] Mannerism is thus vigorously opposed to expressionism and formalism, while it seems to run parallel to symbolism. This interpretation of mannerism, however, is not reflected in the positions of other critics, so Venturi appears to be the only one to support this interpretive line. For VSBA, the paradigmatic Crawford Manor was the representation of establishment architecture, which they criticized for giving up ornamentation and the rich iconographic

tradition of the past. However, certain features of mannerism can be perceived in the graceful forms and in the refined curves of Crawford Manor, which take on a graphicist character. Looking at the expressiveness of this building – with its balconies resembling Michelangelo's volutes in the Laurentian Library and its finely elaborated floor plan – one cannot but object to VSBA that, on the contrary, Rudolph's work is a work of refined mannerist goldsmithing. In comparison, their Guild House appears to be an architecture without quality, monumentalizing everydayness and denying the poetry of the ordinary with its intellectualistic games.

But it must be considered that in their intense and refined research, Venturi and Scott Brown used the conventional element – that is, the material extrapolated from the reality of everyday life – in an unconventional or conceptual manner. Taking up the compositional processes of Pop Art, VSBA used common elements but made them unusual through the distortion of their form, through variations of scale, or through displacement. In the catalog of the exhibition "Postmodernism: Style and Subversion 1970-1990", held at the Victoria & Albert Museum (2011), Denise Scott Brown clarifies the couple's point of view: VSBA's design strategy is to look at the ordinary and the everyday unconventionally to acquire new critical categories. This is not about indulging in irony and kitsch, but about wanting to acquire a new sensitivity rooted in the most vibrant social contexts of their time, a sensitivity driven by an understanding of and interest in history.[16]

On closer inspection, what VSBA call 'mannerist' is therefore not so much their work – i.e., not mere figurative assonance – but their method, that is to say their analytical-creative process, which works by analogies and makes use of unexpected symbols and images. Coinciding with the emerging Pop Art, the interpretation of mannerism as a methodology caused the turn towards *mannerist postmodernism* in Venturi's and Scott Brown's architectural production. The *pastiche* technique and the use of symbols as well as of dislocated objects are in fact procedures that have their roots in mannerist composition, but – according to the postmodernist interpretation – are emptied of the characters of allusion and indeterminacy that characterized historical mannerism. In other words, if mannerism is refined, postmodernism is shameless, and VSBA's architecture seems to veer towards the second option.

2. VSBA's Legacy. Mannerism as a Method

From Venturi and Scott Brown's perspective, mannerism is art suspended between the practice of doing and theoretical reflection, it is thus cultivated art which uses conventional and familiar elements in an unconventional manner, distorting their form through variations of scale, or altering their meaning through displacement. Taking Venturi and Scott Brown's interpretation of mannerism as a method, it is possible to investigate contemporary art and architecture in search of artistic expressions that can be traced back to the mannerist condition.[17]

Evidence of the use of mannerist themes can be seen in a number of recent projects by American young firms, like Johnston Marklee, MOS and Sean Canty, who produce avant-garde architectures mixing the forms of everyday life with geometric abstraction. In Sean Canty's work, in particular, the ultimate separation of interior and exterior generates ambiguous enclosures and mute, paradoxical forms bordering on the hermetic. Canty works on the infinite possibilities of misinterpretation, on the overscaling, and on displacement. In some of his multifamily domestic settings, like the *Concord House* and the *Janus House*, he uses curvature, like cylindrical rotundas covered by conical roofs as a way to add ambiguity to the familiarity of communal space. Using the traditional American shed as a wrapper which enclose conventional spaces arranged in unconventional ways, and twisting the internal space or inserting dislocated and scaled elements in it, Canty reaches uncanny effects.[18] Mannerist spaces such as Giulio Romano's Hall of Giants, Michelangelo's Laurentian Library, and even Alberti's Rucellai Sepulchre played on these uncanny effects. And as in Mannerist settings, Canty's works also require movement in order to have a clearer perception of space. However, Canty brings these spatial deformations achieved through conical hinges within the domestic space, what should be the familiar space and therefore the most protected from the pitfalls of the uncanny.

His design for the *Folly Pavilion* takes inspiration from the tradition of the follies, placeless and functionless buildings standing in the landscape, that become the preferred place to blur intimacy and monumentality by merging a twisted space and a traditional shed. For describing this and other projects, he refers to William Empson's book *Seven Types of Ambiguity*, which had been used as a reference even by Robert Venturi in *Complexity and Contradiction in Architecture*:

> "The Folly Pavilion explores a type of ambiguity where 'two or more alternative meanings are fully resolved into one.' […] The Folly Pavilion hybridizes ancillary architectural elements into a new whole that aims to be equally out of time. The pavilion plays with competing levels of legibility as one moves between the exterior and the interior. […] It is only from inside that one can perceive a sense of a complete figure of the turret."[19]

But the overmanipulation of form, resulting in the dissipation of creative energies, risks to lead to the creation of *machines célibataires,* devices as captivating and seductive as they are incomprehensible and delirious, according to Michel Carrouges.[20]

Fig. 1

One would not expect to find a mannerist vein in works of extraordinary simplicity and iconic value or in authors whose view of architecture is non-referential.[21] On the contrary, certain traits in the work of contemporary architects such as Valerio Olgiati show strong theoretical roots in mannerism, which is evident from his formalist and experimentalist attitude and from his use of compositional techniques such as the reiteration of an architectural pattern that is put in check by a sudden variation or a formal accident; the creation of strongly emotional spaces through skillful cuts, excavations and subtractions of volumes; the use of architectural elements on which scale variations are performed that introduce a hierarchical principle or a shock effect into the composition.

The non-referential architecture theorized by Valerio Olgiati, disengaged from external references, thus essentially autonomous, has somewhat of an enigmatic character – the same ambiguity that made the architecture of historical mannerism elusive. Moreover, it is inspired by the principle of contradiction: "The contradiction of the familiar with the superimposition of something very unfamiliar," as argued by Olgiati through the words of Markus Breitschmid, "leads to a transcending of the seemingly banal or routine to achieve something profoundly sense-making."[22] Using other words, Robert Venturi, Denise Scott Brown and Steven Izenour had also expressed the same concept: "Richness can come from conventional architecture. [...] But it can also come through an adjusting of the scale or context of familiar and conventional elements to produce unusual meanings. [...] The familiar that is a little off has a strange and revealing power."[23] Thus, there is an effect of estrangement in the principle of contradiction – as understood by Olgiati, Venturi, Scott Brown and Izenour – which reveals how the project is by no means naive. But Olgiati adds that contradictions are not mere compositional devices revealing a search for the unusual, such as those used by the avant-garde and, before it, by historical mannerism. These contradictions become vital and powerful only if they are contained within a total, overall and structural vision of the architectural organism. The superimposition, contrast, and dislocation of objects in a context foreign to the usual one reinforce the aura of ambiguity in which reality is enveloped.

The new entrance to the Graubünden Parliament in Chur is among Olgiati's works that reflect mannerist composition the most. The pillar supporting the entrance canopy, which is slightly rotated with respect to the façade of the building, is nothing but an inversion of the existing classical portal behind it. Moreover, this portal is the giant version of the archivolted window that is single on the first floor, twin on the second, and repeated on the sides of the building, respectively on the first and top floors, to form a three- and a five-mullioned window. In a building already characterized by reiteration and leap in scale

– which are both mannerist themes –, Olgiati introduces an element that reverses continuity, while using elements similar to those present in the existing building.

On the other hand, projects such as the residential building in Zug, with its elliptical openings, Villa Além in Portugal, with its differently slanted walls, and other totemic, monochromatic buildings that conceal rather than reveal – such as the Plantahof Auditorium, the project for the Carnasciale winery, and the Atelier Bardill – communicate a sense of disquiet and at the same time a state of suspension, as if it were not possible to define their functional program exactly. Unlike Venturi and Scott Brown's architectures, an halo of ambiguity places Olgiati's architecture outside of time.

Although his ideas stand at the antipodes of Venturi's, the obsession with composition as an autonomous practice, with variation on a theme and with the intentional detachment between form and functional program testify to a mannerist theoretical basis even in the work of Peter Eisenman. If Venturi argued for the communicative nature of architecture, Eisenman, as a student of Colin Rowe, opposed symbolism and figurativeness and advocated instead the autonomy of architecture, which he expressed as the elaboration of a self-sufficient language. A bias toward mannerism can be traced back in his appreciation for the complexity of Vincenzo Scamozzi's work, sophisticated and reluctant to be easily identified or typified. Eisenman's interest for mannerism can be even found in one of his recent study on the architecture of Andrea Palladio, "Palladio Virtuel", an extensive analysis which he first gathered together in an exhibition held at the Yale School of Architecture in 2012, and subsequently expounded in a book, published in 2015.[24] Through this work, he rereads the Palladio's oeuvre, and presents it to us not as a homogeneous *corpus*, but rather as a heterogeneous and in some ways conflicting work, the result of an unprecedented formal tension, where superimposition, stratification and entrelacement give way to disaggregation and separation. Peter Eisenman questions the image of Palladio that historians have created so that he can pave the way for new interpretive hypotheses. And yet we must also specify that what we are seeing is not Palladio's oeuvre, but rather the image of this oeuvre filtered through the eyes of Eisenman. Analogously to Palladio, Peter Eisenman constructs his architectural compositions using autonomous parts, he brings the landscape into his architecture through frames and other spatial devices – like Palladio's colonnades and *barchesse* – and conceives of his designs as hyper-semiotic architectural structures. Concerning this last point, consider, for instance, the use of the portico in Palladio's Rotonda, where the archetypal sign of a house with a pitched roof is added to the house itself as a sort of intensifier. Also, the Rotonda's four porticos can be viewed as a hypothetical second shell for the house, a virtual, conceptual shell analogous to those frame structures that surrounded Eisenman's *cardboard houses*.

"Palladio Virtuel" is an obsessive project, in which architecture is analyzed exclusively through the lens of architecture, and yet, what would seem to be a repetitive and inflexible method of investigation that does not allow for variation or adaptation actually highlights the evolutionary character of Palladio's oeuvre. His vision allows us to see, within Palladio's oeuvre, a number of ambiguities that surpass the number of certainties to which we were accustomed: it allows us to grasp it as an intrinsically *mannerist project*. In order to highlight the presumed mannerist character of Palladio's oeuvre, Eisenman could have used the work of his mentor, Colin Rowe, who compared the blank wall – delineated by a fake balustrade and located in the nobles' wing on the façade of Palladio's house in Vicenza (Casa Cogollo, 1572) – with the white *screen* in Corbu's Villa Schwob at La Chaux-de-Fonds (1916).[25] But Eisenman goes beyond comparative analysis in order to highlight the imbalance and vertigo inherent to the logic of composition within Palladio's oeuvre, which he brings out using the tools of syntax, notation, and *writing within writing* (*inscription*). Eisenman explains that the three architectural elements that Palladio seems to use in order to construct his designs – the portico, the transition space, and the central space – are dislocated compared to what their canonical position should be, just as their very meaning is *dislocated*, and they become "noniconic spatial inscriptions."[26]

And yet, this is not the first time that Eisenman has conducted studies on ideas, concepts and tools drawn from historical mannerism. Working again between reality and fiction, in the *Romeo and Juliet* project in Verona (1985) Eisenman uses the tool of *scaling*, and, as is well known, in mannerism it was very common to use elements at different scales in the same building. In the Roman section of the exhibition "Le Città Immaginate: Un Viaggio in Italia. Nove Progetti per Nove Città" (Imagined Cities: A Trip through Italy. Nine Designs for Nine Cities, 1987), Eisenman, uses the concept of dislocation, which came up with a design that proposed Rome's liberation from the repressions of time, place, scale, and meaning, a city made only of signs and figures that can be altered, superimposed, repeated, shifted.[27] On that occasion, Peter Eisenman staged a mannerist obsession with possibility, presenting in a kind of writing that is definitively separate from the meaning of the very signs that constitute it.

Mannerist echoes can be found in the ambiguity of Peter Eisenman's built architecture as well, from constructions such as his well-known series of houses – a study on the variation of a cube in the manner of Serlio, numbered from I to X – until more recent works. In his building *Residenze Carlo Erba* in Milan (2019), the rhetoric of the bony structure enveloping the body of the building is diluted by the presence of a sturdy basement and by the second layer of the fourth floor, which is set back from the entire façade. This volume is modelled as if it were a dancing sculpture, which the grid of beams and pillars from the fifth to the top floor only serves to pin down. And the effects of the pillars, which can be very conspicuous or slightly set back, at times even subtracted from the façade so as to generate recesses, cannot but recall the interior façades of the Laurentian Library. The frame is an enigmatic architecture that refers to the mannerist space described by art historian Werner Hager, an "impracticable yet existing space."[28]

Fig. 2, 3

3. Conclusions

At a time like the present, it might seem inappropriate to talk about mannerism. Many recent artistic trends tend, indeed, to deny the preciousness of the mannerist world—too sophisticated to be welcoming, lacking vitalism and, ultimately, in opposition to the informal habit that society has now adopted. In other words, the evanescent reasonings about the sophisticated art of composition may seem unimportant today compared to far more urgent problems. Nowadays, the shift from authorship to agency[29] is downplaying the compositional aspects of architecture, prioritizing its social, political and economic implications. As a result, design is understood, indeed, as a process rather than a project, as a formation rather than a form, as a collective and negotiated action involving multiple agents, rather than an act guided by a unique author.

Episodes of crisis and the consequent reappropriation of the past occur cyclically, and, from this perspective, mannerism can be interpreted, as argued by art historian Arnold Hauser, as an undercurrent that again rose to the surface. Continuing to speak of mannerism today means reflecting on the dual role of the architect as author and as intellectual. In fact, given its compositional and at the same time analytical nature, mannerism can be defined as the style of academic thought, a style that is cultivated and refined but ambiguous to the limit of hermeticism. Undoubtedly, this dual activity is undermined by ideological superstructures and biases that bring the project to a standstill. However, this cannot discourage us from pursuing deep, circumstantial reflections and research on it. In the final passage of his speculation on the 'mannerist condition', Costantino Dardi writes: "The only practicable path, therefore, remains that of research architecture – an architecture that investigates its own motivations to pursue the achievement of its own formal results."[30] In other words, mannerism must be investigated as evidence of the author's crucial role in the design process, an author who continuously refers to his own memory, masters, and references, without excluding the possibility of actively affecting the design of the future.

Notes

1. See Jean-François Lyotard, *The Postmodern condition: A Report on Knowledge* (Minneapolis: University of Minnesota Press, 1997). Originally published as *La condition postmoderne: rapport sur le savoir* (Paris: Éditions de Minuit, 1979).
2. Fredric Jameson, *Foreword*, in Lyotard, *The Postmodern condition: A Report on Knowledge*, XX.
3. Robert Venturi, *Complexity and Contradiction in Architecture* (New York: The Museum of Modern Art, 1966), 16.
4. See Denise Costanzo, "Text, lies and architecture: Colin Rowe, Robert Venturi and Mannerism," *The Journal of Architecture*, volume 18, issue 4 (2013), 464. Quotations from: Venturi, *Complexity and Contradiction in Architecture*, 18, 20.
5. See Robert Venturi, Denise Scott Brown, *Architecture as Signs and Systems. For a Mannerist Time* (Cambridge, MA-London: The Belknap Press of Harvard University Press, 2004).
6. Venturi, Scott Brown, *Architecture as Signs and Systems. For a Mannerist Time*, 73–101.
7. Venturi, Scott Brown, 94.
8. Venturi, Scott Brown, 54.
9. Venturi, Scott Brown, 73.
10. See Venturi, Scott Brown, 212–17.
11. See Venturi, Scott Brown, 213.
12. To explain that architecture is first and foremost a text, Venturi refers to the book *The Place of Narrative*, written by art historian Marilyn Aronberg Lavin. She explained that Italian Renaissance wall frescoes were originally conceived as great narrative apparatuses, as devices that told and preserved stories, and were only later acknowledged as art. See Marilyn Aronberg Lavin, *The Place of Narrative. Mural Decoration in Italian Churches, 431–1600* (Chicago: University of Chicago Press, 1995).
13. See Marilyn Aronberg Lavin, *The Place of Narrative. Mural Decoration in Italian Churches, 431–1600* (Chicago: University of Chicago Press, 1995).
14. Venturi, Scott Brown, *Architecture as Signs and Systems*, 42.
15. Venturi, Scott Brown, *Architecture as Signs and Systems*, 218.
16. See Denise Scott Brown, "Our Postmodernism," in *Postmodernism. Style and Subversion, 1970-1990*, eds. Glenn Adamson, Jane Pavitt (London: V&A Publishing, 2011), 106–111.
17. See Lina Malfona, *La condizione manierista* (Siracusa: Lettera Ventidue, 2021).
18. See Anthony Vidler, *The Architectural Uncanny, Essays in the Modern Unhomely* (Cambridge MA-London: The MIT Press, 1992).
19. Sean Canty, "Conical Hinges. Shaping Ambiguous Enclosures," in Jonathon Anderson and Lois Weinthal, eds., *Digital Fabrication in Interior Design. Body, Object, Enclosure* (New York and London: Routledge, 2022), 207.
20. See Michel Carrouges, *Les machines célibataires* (Paris: Librairies Arcanes, 1954).
21. See Valerio Olgiati, Markus Breitschmid, *Non-Referential Architecture* (Zurich: Park Books, 2019). What is meant by 'non-referential architecture' is an architecture free of images, references, and symbols, which stemmed from the reaction to both the postmodernist greed for images and the structural aridity of the Modern Movement.
22. Olgiati, Breitschmid, *Non-Referential Architecture*, 98.
23. Robert Venturi, Denise Scott Brown, Steven Izenour, *Learning from Las Vegas. The Forgotten Symbolism of Architectural Form*, 130.
24. Peter Eisenman with Matt Roman, *Palladio Virtuel* (New Haven: Yale University Press, 2015).
25. See Colin Rowe, "Mannerism and Modern Architecture," *Architectural Review* no. 107 (May 1950).
26. Peter Eisenman with Matt Roman, 10
27. Lina Malfona, "Sleeping Beauty. Aesthetics of Ruin, Corruption and Rome," in *Quotation: What does history have in store for architecture today?*, eds. Gevork Hartoonian, John Ting (Canberra, Australia: SAHANZ, 2017), 363; see also AA. VV., *Le città immaginate: Un viaggio in Italia. Nove progetti per nove città* (Milano: Electa-XVII Triennale, 1987).
28. Werner Hager, "Strutture spaziali del Manierismo nell'architettura italiana," *Bollettino CISA*, no. IX, 1967, 262.
29. See Robert Somol's paper presented at the symposium "The Future or the Eclipse of Criticism", curated by Lina Malfona, University of Pisa, April 4, 2023. https://polittico.unipi.it/event/symposium-the-future-or-the-eclipse-of-criticism, accessed May 20, 2023.
30. Costantino Dardi, *Semplice e lineare complesso. L'acquedotto di Spoleto* (Rome: Edizioni Kappa, 1987), 23.

Figures

Fig. 1. Sean Canty, Janus House, unbuilt. Image © Studio Sean Canty
Fig. 2-3. Eisenman Architects, Degli Esposti Architetti, AZ Studio, Residenze Carlo Erba, Milano. Image © Maurizio Montagna

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Biography
Lina Malfona is Associate Professor in Architectural Design at the University of Pisa, where she founded the research lab *Polit(t)ico*. The founder of Malfona Petrini Architecture, she currently teaches Architectural Theory at Cornell University. She pursued her research thanks to a Visiting Scholarship from the Canadian Centre for Architecture and a Fulbright grant at IFA, NYU, among others. She authored essays on the history, theory and criticism of architecture, focusing on three research paths: the relationship between architectural form, urban/suburban space and new technologies; the examination of some trends in modern and contemporary architecture; the investigation of the legacy of the masters. Among her books, *Residentialism. A Suburban Archipelago* (2021) and *La Condizione manierista* (2021). She recently curated the conferences and edited the books *Indagine sul manierismo* (2021) and *Unfinished* (2022). Her writings have been published in many journals, among which *Log, Domus* and *The Avery Review*.

Words, Associations, and Worldviews
A case of pol Architecture of Ahmedabad

Modi, Khevna[1,2]
1. CEPT University, School of Architecture, Ahmedabad, India, khevna97@gmail.com
2. Carnegie Mellon University, School of Architecture, College of Fine Arts, USA, kdmodi@andrew.cmu.edu

Abstract

The prevalent discourses on Ahmedabad *pol*s discuss the urban conditions, structure, materiality, form, morphology, spatial character, history, community living, and so on. Yet until recently, they continue to position the *pol*s outside of the more local South Asian cultural perspective. Out of the various modes of spatial thinking, here I chose to interpret the everyday words of inhabitation from the prevalent language that constructs the architecture of the public domain of the forted area, particularly the residential *pol*s. Upon meticulously drawing spatial perceptions from these word studies, the complexities in each of them and their associations with the local culture become apparent. Therefore, this research is skewed towards finding meaning from these associations and formulating a spatio-cultural worldview, particularly that discusses the often missed out nuances.

In this regard, this paper foregrounds the discussion on the perception of the built form of the walled city of Ahmedabad derived from cultural associations by primarily engaging with the spatial vocabulary from the language of the - now transformed into an urban community of 'Harkishandas Sheth ni Pol' in Ahmedabad. The architectural nuances and therefore the perception drawn out from the local and more immediate knowledge system lies at the juncture of studying spatial vocabulary, its indicative references in dictionaries, cognate words, etymological origin, everyday conversations, word occurrence in expressions, cross-references from historic gazetteers and visual cues.

It is found that the perception of spaces that evolved since the upheavals in this region, which is the beginning of the accounted period, can be linked to Gujarati language, accompanied by cultural influences from other geographical contexts as well. Even today, across all scales of the built environment, this spatial vocabulary is a significant part of the culture of the urban community within the *pol*s. The narrative, however paradoxically written in English, opens up discussions to a wider readership on an alternate perspective abstracted from the rather immediate cultural context against the generalized hegemonic English discourses on the production, perception, and conception of the architecture of the historic walled city of Ahmedabad.

Key words: Gujarati words, *pol*, cultural context, immediate associations, spatial perception.

1. Introduction

An elderly local resident of Pipdawalo Khancho in Harkishandas Sheth ni Pol (Fig. 1) pointed towards a Peepal tree and said, "a *chotro* is usually open like this and has a tree in the center. It is an important place within the pol" (Pol 2020). The same space was referred to by another person residing in the same *pol* as a "*chowkthun*," and he clarified, "it is a space surrounded by built environment, most likely residences" (Pol 2020). As the conversation continued, I asked how a *chotro* was different from a *chowkthun* but the group of residents looked puzzled. As they exchanged glances with each other, one of them suggested, "a *chowkthun* is typically larger than a *chowk*" (Pol 2020). Few others were not convinced and oscillated towards the other end implying that a *chowk* is larger. As they recalled, more words such as *chakla*s, *chabutaro*, *and chogaan* among others, poured out to expand the Gujarati lexicon attributing to open spaces. I understood that as an outsider who did not grow up in the *pol*s, they felt my inquiry on the difference between the associations with the spatial names themselves lacked an association with the place. This is when I begin to realize that their perception of intricately linked spaces went inexplicably beyond the scale, hierarchy, dimensionality, or function of the space. Evidently, the idea of any open space perhaps resonated with multiple local associations to which only they had conceptual access.
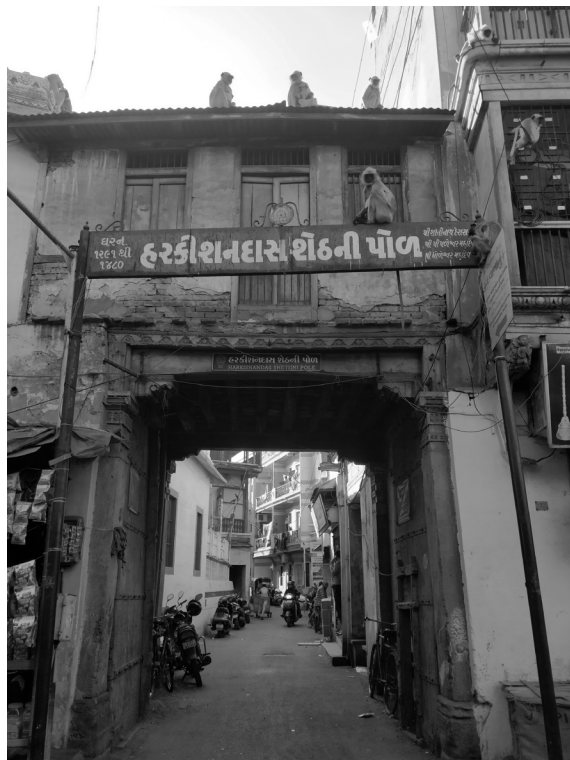
Fig. 1

2. Situating Spatial Perceptions through Words

Typically, *pol*s are intricate housing clusters going up to a maximum of four levels, stacked next to each other and accessed by a main street. They are extensively laid and traditionally evolved living conditions developed over the years and continue to host residential, commercial, religious, and other institutional activities even today. Harkishandas Sheth ni Pol (Fig. 2) is accessed primarily through the street of the greater Mandvi ni Pol situated in Khadia. Its main street runs along the East-West direction without any exit and is colloquially referred to as 'the *pol*.'

In this *pol*, like most *pol*s, houses lie adjacent to both sides of the street, densely packed with longer shared walls and shorter edges facing the street. The slightly elaborated exterior precedes the typical wooden door of the house, in most cases integrated along with four-five steps rising above the street level. The narrow street in Sheth ni Pol, accompanied by the continuous stretches of exteriors of the adjoining houses, branches at instances on either side into another organizational unit recognized by the residents of the *pol*. These units are also identified administratively by the Ahmedabad Municipal Corporation. In Harkishandas Sheth ni Pol, these are Derasarwalo Khancho, Bapabhai ni Khadki, Popat Gazetteer ni Khadki, Kishor Sheri, Nagari Sheth ni Khadki, Matawalo Khancho, Pipdawalo Khancho, and Kuwawalo Khancho in their order of approach from *pol no medo* (Fig. 1). Most *pol*s only have one way to approach and are often discretely interconnected with each other from within.

Usually, the approach leads to the primary street and is an extravagantly ornamented timber floor above a timber gateway traditionally built to house the picket, known as *pol no medo*.

At the scale of the city, the perception of the built environment has been understood as either (i) *pol*s or (ii) *chowk*s; much evidently, these are mere translations of streets and open spaces, respectively. A narrow street primarily for commuting and determining the extent of a territory or enclosed space is identified as a *pol*. When this street widens, at any instance, into a fairly vast space to accommodate the needs of more people, it becomes a *chowk*. This alludes that the architectural perceptions of the walled city, have often been simplified under two dichotomic English terms. Not only is the perception of a *pol* different from that of a street but also the word *pol* resonates with a spectrum of meanings; the same goes with *chowk*s. When we go beyond this dichotomy, the architecture of Ahmedabad, specifically the spaces in Harkishandas Sheth ni Pol, is nuanced perceptually and often differs from one another in spatial, cultural, and social ways.

1. Pol no medo
2. Shri Shantinath Jain Derasar
3. Derasarwalo Khancho
4. Kishor Sheri
5. Kuwawalo Khancho
6. Pipdawalo Khancho
7. Pipdeshwar Mahadev shrine
8. Amdavad Vishnagar Vaniya ni Vaadi
9. Dehli (unnamed)
10. Bahuchar Mata Mandir
11. Matawalo Khancho
12. Nagari Sheth ni Khadki
13. Shri Dholeshwar Mahadev Mandir
14. Popat Gazetteer ni Khadki
15. Bapabhai ni Khadki

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Fig. 2

2.1. Condition 1: The Word '*pol*' and the various spatial nuances

Maganlal Vakhatchand says the streets that ran within the region of Ahmedabad were long, narrow, and crooked to secure the residents in times of an invasion. These streets have come to be known as *pol*s. The etymology of the word *pol* traces to *pratoli* in Sanskrit which translates to a broadway or principal road through a town or a village in English (Williams 1990). Learning from the residents of Harkishandas Sheth ni Pol, the reference of the word can be understood under three broad categories: (i) a defined entrance condition to an enclosed territory, most commonly known as *pol no medo*, (ii) the main street within the same territory and (iii) the area enclosed by the territory itself. This means, that a *pol* is not just a principal street, but one that connects and also determines the access

to houses and thus the extent of the larger territory it encloses. Therefore, whatever is accessed through a street, administratively and by a presumed logic, also belongs to the realms of the *pol*.

Organizationally, a *pol* can be believed as the largest enclosed area or territory among others. A fine example is Mandvi ni Pol, in Khadia, which is proudly proclaimed by *amdavadis* as the largest *pol*. On eliminating administrative boundaries of the adjoining *pols*, it is just a long spine of utensil market street situated between Manek Chowk and Astodia Chakla, which constitutes other large *pols*, including Harkishandas Sheth ni Pol, that is also accessed directly through this street. Here, there is not much difference in referring to Mandvi ni Pol as a *pol* and Harkishandas Sheth ni Pol also as a *pol*. However, at times for clarification purposes, prefixes like *nani – moti* are used before the word to convey the relative scales, even for instance, between Harkishandas Sheth ni Pol and Matawalo Khancho situated within.

While these are some scalar differences in the perception of a similar kind of organizational unit within Ahmedabad, the word *pol* represents multiple meanings for the community. From Gujarati dictionaries, we know that *pol* refers to (i) a small neighborhood (a *khadki*, *sheri*, *mahollo*, *gali*), (ii) a gated neighborhood or a gate, (iii) a street, (iv) something which is wide, and (v) a continuous road. Quintessentially, the word carries a sense of neighborhood or an enclosed space with a gate to access. Not only this, but the word is also suggestive of the various types of organizational units of enclosed territories that are perceived under the larger umbrella of the word '*pol*', but are nuanced in other ways. *Khancho, khadki, dehli, sheri, mahollo, gali,* and *vaas* among many others are the words that architecturally manifest just as *pol*; enclosed territories with principal street determining access to the houses.

Although both the spaces, *pol* and a *khancho* are similar spatially, Harkishandas Sheth ni Pol administratively as well as colloquially identifies its *khanchas* such as Derasarwalo Khancho with a Jain temple called Shri Shantinath Jain Derasar at its beginning, Matawalo Khancho identified by a Hindu temple called Bahuchar Mata Mandir, Pipdawalo Khancho which surrounds a huge *peepal* tree and Kuwawalo Khancho marked by a *kuwo* at its entrance. And yet they are locally also referred to as *pols* to communicate a sense of territory. However, in Sheth ni Pol, a *khancho* is identified when: (i) two or more streets intersect (ii) narrower streets branch from a main street at a prominent angle and (iii) an area enclosed by the territory beyond the intersection of streets. Clearly, *khancho* is locally associated with the intersection of streets while a *pol* is merely a street.

Further, the etymology of the word refers to *karsha* in Sanskrit, which also means an act of dragging or drawing, plowing, agriculture or anything scratched off (Williams 1990). It is perhaps from here that the word is associated with the traditional form of an agricultural plow whose shaft turns at an angle to carve out soil for tilling. This angular condition from the form of an instrument of a rural context is equated to a spatial condition in an urban environment, particularly residences. There could be various kinds of these angular conditions, such as a street branching into a smaller street, or a street itself turning in another direction that comes to identify as a *khancho*.

Although the word *pol* is suggestive of all kinds of organizational units of community living including *khancho*. In Gujarati dictionaries, a *khancho* refers to (i) a stoppage or a checkpoint, (ii) hesitation, (iii) a mark, (iv) a pit in an otherwise flat land, (v) a corner, (vi) a neighborhood (*pol*, *gali*) or a narrow street, (vii) bent portion of objects and (viii) a problem, indicating the non-spatial dimension of perception as well. *Khancho avvo* an expression in the Gujarati language, literally means an approaching turn and is referred to when a problem arises. Similarly, *khancho padvo, khancho rakhvo* and *khancho kadhvo* mean that a problem has arisen, to carve something out, a kind of stoppage or even a turning road in the most literal way. Architecturally, these expressions translate to a territory and its street situated at a relative angle from the direction of the principal street. Such an intersecting condition determines the beginning of a territory called *khancho*. For instance, Matawalo Khancho lies at the extreme end of the main street of Sheth ni Pol, beginning with the remnants of *pol no medo* and approaching on taking a right turn. Everything beyond *pol no medo* here is considered a part of this territory. The same is the case with Derasarwalo Khancho and Kuwawalo Khancho identified solely relative to their respective axis of approaches, even without a *pol no medo* as a point of reference.

While a *khancho* is perceived as an enclosed territory situated beyond an intersecting condition, a *khadki* is commonly conceptualized as one of the smallest indivisible organizational units of living in Ahmedabad *pols*. These *khadkis*, be they large or small, are perceived by the residents to be spaces of transition between the primary street and the court-facing interiors of the *khadki*. For some *khadkis* in Sheth ni Pol, the door extends up to a few feet and remnants of another door appear, some have a raised plinth, at times the tarred road turns into a paved space, and a few approaches to some *khadkis* are lined with parked vehicles while other approaches simply shrink in width. Upon entering a

khadki, in most cases, all the houses face the *chowk* and share the space at ground level. Just like *pols*, they have one approach and no exits.

Harkishandas Sheth ni Pol contains fourteen *khadkis*, only some of them with a designated toponym. Here, a *khadki* is conceptualised as (i) a smaller wooden gate through which more than two houses can be accessed and (ii) a cluster of more than two houses with or without an existing gate accessed through a common street. Not only is a *khadki* perceived as smaller in scale but also identified most flexibly as even R.N. Mehta (1984-85) claims that the toponyms of *khadkis* of Ahmedabad vary widely, 40 percent of them named after prominent people residing within and 30 percent named after the caste and occupation of its residents. Although a door or a doorway identifies an enclosed territory as *khadki* by determining its extent, not all of them in Sheth ni Pol have one. Some other ways in which a *khadki* is identified are (i) change in ground condition, (ii) wooden door frame with threshold, (iii) remnants of a door, (iv) narrower width of the street, (v) branching of the street, (vi) an upper floor above a door and (vii) enclosed open to sky space for adjoining houses. Nagari Sheth ni Khadki is identified as one when the ground condition changes from tarred to *kota* paving and Bapabhai ni Khadki is identified as the street narrows. Along with these interpretations from Sheth ni Pol and from its other etymological origin *khadakkika* or *khatakk* which means a go-between (Williams 1990), such a space to organize living conditions is locally perceived as a threshold condition identified most flexibly among other organizational units.

Yet, plenty of references in the Gujarati lexicon are linked to doors and doorways. They are, (i) open space outside the main door of a house or built space situated beyond the main door of a house with a doorway, (ii) a niche, (iii) a gate or doorway, (iv) a secret doorway, (v) two or more houses with a common doorway or *dehli*, (vi) a neighborhood (*mahollo*, *sheri*, *pol*) and (vii) a medicinal plant. Similarly, the Sanskrit etymology of the same word is *khatakki* or *khatakkika* which outlines a spatial condition such as a side door (Williams 1990). As against the *pol no medo* which is an elaborate expression of many *pols* and their scale, a side door, whether a part of such a giant door or even independently situated, is much smaller in scale and so is a *khadki*. Hence, although *khadkis* are referred as *pols* in everyday parlance, they are locally perceived as smaller territories often clarified as *nani pol*.

2.2. Condition 2: The Word '*chowk*' and the various spatial nuances
Simply put, a *chowk* in the context of Ahmedabad is an open space. In Sheth ni Pol, it is understood as (i) an open court within the house, (ii) an open court within a *khadki*, (iii) an open court within a community building, and (iv) an exceptionally large open space between adjoining neighborhoods. In each of these, the unobstructed fairly large space is characteristic of an open-towards-sky relationship; a built area surrounding a fairly large space and without an overhead roof. Within houses of the *pol*, the same *chowk* is situated above an underground water tank, known as *taanku*, which harvests water throughout the year. An expression in Gujarati *chowk purvo*, refers to the act of decorating a space during an auspicious event or making *rangoli*, which is associated with festivities across many Indian cultures. Literally, the expression conveys, to fill up the *chowk* or to fill *chowk*, where the former reference is made to a space, while the latter suggests the element limestone used to make *rangoli*. Much evidently, such a space connotes a sense of congregation.

In fact, the etymology of the word *chowk* traces to *chatushka* in Sanskrit which means any sign having four marks, a set of four, a collection of four, a quadrangular courtyard, and a cross-way (Williams 1990). By numerical logic, a *chowk* is always a quadrangular space. Thus conceptually, "a *chowk* is commonly understood as an open-to-sky space which is also enclosed on four sides", agrees with Divya, a young female resident from Matawalo Khancho (Pol 2020).

The same word, in dictionaries, refers to (i) a market in an open ground, an open ground within a neighborhood, an open space outside a temple, (ii) quadrangular open space within a house which has a *taanku* below, (iii) a quadrangular shape, a *swastika*, (iv) a number four, four times, four seconds, four lines of a poem, (v) limestone, a powder sprinkled on the threshold during a Parsi wedding, a picture made with limestone, (vi) a vegetable, (vi) cart attached to the buffalo. Clearly, the references to the built environment here, suggest an open space at two scales, (i) a house and (ii) a city. From conversations with the residents of Harkishandas Sheth ni Pol also, the space within the house is referred to as a *chowk*, and the same word enunciates a bustling day-market space at the scale of a city, known as Manek Chowk. The association of *chowk* with two drastically different scales, in fact also colloquially encompasses a range of other kinds of open spaces under the same word, including those such as *chakla*, *choro,* and even *chowkthun*.

Typically, a *chowkthun* is an open-to-sky space considered larger in scale than a *chowk* of a house or *khadki* and lies at the end of a narrow street. While it refers to a peripheral condition from multiple references in dictionaries that define a *chowkthun* as (i) appearance, (ii) a box or space to hold ceramics and glassware, a square or rectangular object hollow from within, a frame (iii) *chowk* within a house, or the front yard of the house, (iv) a crossway, (v) to grab, or snatch, (vi) a stanza of a poem, four lines of a poem, (vii) denture, (viii) wooden window frame usually square or rectangular, (ix) small seating and (x) an idea, plan or skill. Not only this, but the word originates from a combination of Sanskrit words *chatur + kashtha* which mean four pieces of wood or timber stick or four instruments to measure length or four kinds of measure (Williams 1990), which refers to the four sides of the window frame that hold together known as *baarsaakh*. These resemble the four-sided peripheral condition of a *chowk*. Architecturally, as we see, such a space manifests in the built environment, much like a *chowk*.

However, it is not just a matter of these scalar differences which make a *chowkthun* distinct from a *chowk*. Gujarati expressions such as *chowkthun besvu* or *chowkthun besi javu* literally translate to a *chowkthun* settling down. This phrase is used to communicate things falling in their place or agreement on a marital union or when joints of two materials sit together precisely. Another etymological origin *chatur + kashthi* translates to four stand-stock still objects (Williams 1990), which architecturally translates to immovable edges, in this case, of open space. Spatially, this means that *chowkthun* has an open-to-sky relationship derived incidentally out of the formation of spaces around it, hence, in most cases, unlike a *chowk*, it is made up of irregular sides. Therefore, *chowkthun* is perceived as the periphery of the open space, rather than the open space itself. To exemplify, the open space in Pipdawalo Khancho, one of the most significant congregation spaces in Sheth ni Pol has multiple numbers of sides to its periphery and is referred to as a *chowkthun*, whose edges are formed by the houses, *vaadi,* and even adjoining street.

3. Spatial Perception of Words and their Immediate Ecologies

Remarkably, the walled city of Ahmedabad is dotted with *chabutara*s positioned within the public space, just like the one in Matawalo Khancho. Here, it sits on top of a plinth, previously a part of a now demolished house, located on the edges of the open space. A *chabutaro* is a vertical structure with a distinct geometrically regular enclosure on top, erected within the public spaces in the walled city to house and feed birds.

The word has associations with Persian culture as it is known that the etymology of *chabutaro*, as well as *chotro*, is *chatvara* in Sanskrit and *chavtara* in Farsi. A *chabutaro* is generally regarded as a place for pigeons, before other birds in the country. The same pigeon, in the Gujarati language, is identified as a *kabutar*, bearing a close phonetic resemblance to the name of the structure itself. Not only this but in Farsi, a *chabutaro* is essentially referred to as *kabutarkhana*, composed of *kabutar + khana*. Again, like other variations of *chabutaro* found across European and Middle Eastern countries such as dovecots, doocots, *pigeonniers,* and columbarium, a *kabutarkhana* is particularly made to house pigeons and doves. It is commonly believed that such structures originated first in Upper Egypt and Iran during the medieval era. Perhaps, with the incoming Paris community in the 7th century C.E. or during the Persian rule in India, such a spatial element found its way from Middle Eastern regions into the Indian sub-continent. Nevertheless, across cultures, this structure has been intricately linked to birds, especially pigeons, and doves.

In discussing about the *chakla*s of Ahmedabad during the Mughal times, Ratnamanirao Bhimrao (1929), says that the *chakla*s within the city consisted of *chabutara*s where a guard was stationed during the night to ensure the security of neighboring areas. Eventually, the same spots turned into police stations as Achyut Yagnik says, "Members of the community brought their complaints to the officer, who continued the local tradition where punishment for petty criminals was a handful of grain for the birds" (Achyut Yagnik, AHMEDABAD From Royal City to Megacity 2016). An expression in Gujarati, *chabutarey lai javu* means to take the guilty to a police station or to lodge a complaint. It literally translates to take somebody to the *chabutaro*. According to Gujarati dictionaries, *chabutaro* refers to (i) *otlo*, *chotro*, something which is spread out, (ii) a place to collect tax, (iii) a summer house to rest, (iv) a high plinth to feed birds in the city center, *parabdi*, a place to feed birds within a village, (v) a balcony with roof, (vi) a place for public gathering, (vii) *choro*, (viii) a judiciary office and (ix) a place for guards, police station. While *chabutaro* associates itself with birds, it is also known here that the word is closely linked to the judiciary realm as well.

Across time periods, a *chabutaro* in the context of Ahmedabad has evolved from being perceived as a structure for birds to a place of judiciary significance, and today to an expression of heritage and culture, more than anything else. Very often, the same *chabutaro* is also referred to as a *parabdi*. In

dictionaries, *parabdi* refers to (i) a structure made up of wood, metal, or bricks, used to feed grains and water to pigeons and sparrows, and (ii) *parab*. In Sheth ni Pol, not only is the structure in Matawalo Khancho identified as a *parabdi*, but the space around the well near Kuwawalo Khancho and Kishor Sheri too are identified as *parabdi*s. Such a space is typically a plinth constructed around the well to hold water and is widely known as an embankment for birds and animals to drink water.

A *parabdi* encompasses a wider spectrum of space not only for birds but also for humans, to feed and drink water, both. While *parabdi* originates from the Sanskrit word *paravata* which means something remote, distant, or traveling from a distant or foreign land, *parab* originates from *prapa* which is a place for travelers to drink water (Williams 1990). In Gujarati, the suffix –*di* at the end generally indicates a smaller scale. However, *parabdi* is particularly in reference to a *chabutaro*-like structure, which is to feed other species, whereas *parab* is for humans. It is, therefore, not necessarily a difference of scales alone. In Pipdawalo Khancho, such an embankment, whether around a well to contain water, or around trees to withhold its roots from spreading, is known as a *thaalu*. In Gujarati dictionaries, the word refers to (i) a space around the well, (ii) a space above the *taanku* of the house usually covered, *chowkdi*, (iii) the sill of a niche protruding out, (iv) a quadrangular container made up of wood or metal placed below a *ghanti* to collect flour, (v) a container for the tree, (vi) entangled roots and (vii) a place for something suggesting that a *thaalu* is identified as an adjoining space to another space or element. It has its roots in the Sanskrit word *sthaal* which means any vessel or receptacle, plate, cup, bowl, dish, caldron, pot, culinary utensil, and the hollow of a tooth (Williams 1990). Here, the perception of space is from objects used to contain. Further, *thaali* in Gujarati households is an object to contain food, much like a plate. While *thaalu* is a neutrally gendered word in Gujarati, *thaali* is feminine; their differences are mostly observed in scales. A Gujarati expression *thaale paadvu* is used when something is placed in an appropriate location, indicating when a place is defined for something. In a public realm, such a space is used to sit and gather around the primary element by containing it. From these, *thaalu* is imagined as a containing or enclosing space in proximity to another space.

4. Social Constructs and Connotations in Spatial Perceptions through Words

The perceptions around spaces are developed alongside years of social conditioning and traditions, bringing forth the disparities in our culture. In view of this, an *otlo* in the *pol*s, is typically understood as a raised flat surface preceding every house and adjacent to the street. From an expression, *otlo aapiye besva toh mann karey gharma pesva* which literally translates to welcoming someone until the *otlo* of the house but eventually they walk all the way inside. This is used when a person takes advantage of you by offering little help. Another similar expression, *otlo maro ne ghar taru* literally translates to the *otlo* belonging to an outsider and the house to its owner, and such an expression is called upon when a person is satisfied with little help offered. Hence, from these phrases, we know about the perceptions around an *otlo*, which is neither a part of the house, nor a part of the street, but arguably a seamless spatial condition in between both realms. In Gujarati dictionaries, an *otlo* is (i) a *chotro* extended beyond the front door *baarsaakh*, a seating belonging to the house but facing the street, a space uplifted from the ground, (ii) a beginning point, (iii) to go bad or to be estranged and (iv) a seating next to the house. Hence, an *otlo* is a continuously negotiated space between the owner of the house and the public as it belongs to the house as well as opens to passersby.

Otlo originates from the Sanskrit word *aasthal*, which means to stand or remain on or by, to ascend or mount, to stay near, to go towards, to resort to, to act according to, and to follow (Williams 1990). Another origin of the word is a combination of *unnat + rathal* where the former means something bent or turned upwards, elevated, lifted, raised, high, tall, and prominent. The latter means a place (Williams 1990). On merging the two meanings, an *otlo* is a place higher in elevation. Residents of Matawalo Khancho take pride in identifying a house facing the *chowkthun* as an exceptional house, mainly due to its *otlo*, which measures around three feet in height. *Otlo uthvo* and *otlo vaadvo* are some other expressions that suggest that the space is thought of as an expression of reputation and prestige for a family. Not only is this reputation of the family linked to the level of the house, but also the behavior of females in such a negotiated space. Often expressed in common parlance *chaar madey chotla, bhange gharna otla*, literally translates to an *otlo* breaking down when four ponytails gather; an *otlo* symbolizes the reputation of the family (Fig. 3). Such an outlook towards spatial perceptions suggests how deeply anchored they are even within the social biases and patriarchal expressions of culture.

The word *dehli* originates from Farsi *dehaleez* which refers to a threshold condition. As the saying goes, *Hero Ghoghe jai aavyo ane dehle haath dai aavyo*, here, the word *dehlo* refers to a threshold space situated along the fort wall of the city. It is expressed when a task performed is incomplete and literally refers to a well-known folklore in which a boy Hero travels to the city of Ghogha but only until the *dehlo*. Historically, Ghogha was a much more significant city, 187 km away from Ahmedabad,

situated on the west coast of the Indian subcontinent. The port of the same city, Ghoghabandar was flourishing with trade in the 16th century C.E. as Abul Fazal I Allami says, "Vessels sail from and trade to Ghogha. The cargos are put into small ships called Tawari which transport them to Khambhayat" (Fazl-I-Allami 1949). Such documents from the Mughal period, that talk about Persian culture infusing into the subcontinent only strengthen the idea that *dehli* shares resemblances with the Middle Eastern context.

Fig. 3

From the dictionary references such as (i) a door, *khadki* or the front portion of the house, (ii) space/building to keep cart, (iii) a small house, (iv) a police station, and (v) a *khancho* within a *pol* with a small entrance condition and (vi) a huge house, space in front of the house for the guard, a *dehli* predominantly refers to a threshold space in the front yard, probably owned by one person. Much obviously, next to a *khadki*, it is also one of the smallest units of living. In Sheth ni Pol, the *dehli* at the end of the principal street is sometimes referred to as a *khadki* as today it remains vacant, and the house has been allocated to multiple families. In discussing about the history of place names of *dehli*s in Ahmedabad, R.N. Mehta (1984-85) claims that around 67 percent of the *dehli*s in Ahmedabad are named after eminent people living within. Clearly, *dehli*s have been associated with wealth and power, only belonging to an uppermost class within a *pol*. Even today, *dehli*s continue to be remembered as such, resonating with the ingrained classism within a culture.

Unlike a *dehlo*, *dehli* and a *dehlu* which in most cases differ in their scale alone, a *vaado* and a *vaadi* are found to be distinctly nuanced in their spatial character. Across dictionaries, a *vaadi* is (i) a vessel with holes, or an earthen vessel, (ii) a neighborhood (*vaado*, *mahollo*, *pol*), (iii) a measure for the survey, (iv) handmade paper flowers, (v) a garden, (vi) a house with a garden, (vii) a building for a feast, a community hall with an enclosure around and a *chowk* within, (viii) flower decoration, (ix) a community settlement, (x) land with a house surrounded by trees and bushes, (xi) a farm with a house and (xii) a family. These recurring references to a park, garden, and farm imply that a *vaadi* is associated with natural conditions. It originates from the Sanskrit word *vaatika*, which means anything windy, stormy, something affected by wind, rheumatic, exciting, or allaying wind (Williams 1990). It also refers to an enclosed piece of ground, as known from another origin *vaati* (Williams 1990). Overall, a *vaadi* is perceived as a natural environment protected from invaders.

There is a clear emphasis on the edge condition of the *vaad* for protection in expressions such as *vaad karvi* or *vaad bandhvi* which refer to making arrangements to protect in order to deal with a threat. While *vaad thaine chibhda gale* is used when a person who was supposed to protect, itself betrays, again *vaad* acts as a protective edge. Likewise, in an urban context, a *vaadi* is perceived as a space for community unions, typically to host events; a place where these unions socially manifest and such a building typology symbolizes looking after the people. Amdavad Vishnagar Vaniya ni Vaadi in Pipdawalo Khancho exemplifies such a community space, coincidentally also surrounded on its three edges by a built space resembling a *chawl* typology, previously used to host guests and travelers. Today, this *vaadi* has a *chowk* in the center to host events, implying that it is intricately linked to recreation.

A *vaado,* however originates from the Marathi word *vaada* (Williams 1990), which across dictionaries refers to a settlement, neighborhood, a large barren land with or without house, stable for cattle, all of which with a protective edge condition. Some other references also refer to *vaado* as a sect or a union. These references give no indication of cultivated land for any purpose. Unlike *dehlo* and *dehli*, where the differences are scalar (*dehlo* considered massive), a *vaadi* is usually perceived as one with flowering plants, usable land for farming, or even a space for recreation. These perceptions generate a nuanced understanding of when spaces belonging to the same family come to associate themselves with evidently contrasting characteristics of land conditions and denote the social connotations around them.

5. Re-claiming the Immediate Cultural Associations
It is found that the perception of spaces that evolved since the upheavals in this region, which is the beginning of the accounted period, is predominantly linked to the Gujarati language, accompanied by cultural influences from other geographical contexts as well. The perceptions of places, although shared across geographies, cultures, and histories, continue to retain distinct meanings within the culture that the local people closely associate with. This intangibility of spatial associations can be extrapolated from the language, names, lifestyle, traditions, rituals, and stories. Every such culture can be linked to a worldview that its people believe, which Lera Boroditsky proves through her extensive research experiments to conclude, "In recent years empirical evidence for this casual relation, has emerged indicating that one's mother tongue does indeed mold the way one thinks about many aspects of the world, including space and time" (Boroditsky 2011). Architecturally speaking, every culture and community across the globe has its own way of producing, perceiving, and constructing spaces. These shared associations with the inhabited places are mentally constructed over the years eventually connecting the people to a shared worldview. When William Raymonds says, "…we are just not speaking the same language. We have different immediate values or different kinds of valuation, or that we are aware, often intangibly, of different formations and distributions of energy and interest" (Raymonds 1988), he too attempts to foreground the argument that languages and cultures bring with them recognizably discrete immediate associations.

Now and then, these immediate associations are lost and standardised in architectural discourses that primarily rely on formal modes of communication. Thus, beyond these hegemonic approaches which overlook the cultural context of spaces in Ahmedabad, it is from the immediate knowledge system, we know that "unlike bedroom, dining room, etc. - which are functional descriptions of space – *otlo, osri, parsal* are space types that entail an entire culturally coded logic of location within the dwelling, patterns of space use, and sometimes even spatial quality." (Gauri Bharat 2010). What might appear like a place to rest and sleep and be called a 'bedroom,' might in fact resonate even more personally to residents of the *pol*s as a space shared with other members too, much like observed in every other Indian household. This is suggestive of the culturally rich meaning that a space embodies for its people. As we have also seen before, describing open spaces in the *pol* just as huge, vast, and unobstructed excludes the local meaning that each kind of 'open space' has for its community. Today, not only are these open spaces occupied by parked two-wheelers and some other commercial activities, their different kinds namely *chowk*, *chowkthun*, *chotro,* and *vaadi* bring particularities in their perception which are constructed over years.

Ahmedabad, like many other, historically accounted cities, was at the confluence of global cultural exchanges for almost six centuries until the 18th century C.E. Today, the walled city shares spatial vocabulary and architectural perceptions across geographies that speak Arabic, Persian, Portuguese, and even the neighboring Marathi. Yet, it is natural to believe that the immediate association of the spaces to its local community largely remain internalized. This means that a *chabutaro*, although a borrowed word from Persian culture, occurs in Ahmedabad as an internalized version of its community. On the other hand, a *chowk* embodies meaning for the people that speak Gujarati, while a square embodies a different meaning for those who speak English, regardless of the striking similarities in the physical attributes of both the spaces underpinning the argument that immediate cultural associations go beyond resemblances in spatial character or even vocabulary across geographies.

6. Conclusion: An alternate Worldview of the *pol*s
For long, public spaces of Ahmedabad *pol*s have been understood and its perceptions expressed from a distance. However canonical, they were also a universal construction of pol typology, where the nuances from the cultural context remained afar. The multi-dimensionality of spatial perceptions across cultures appears by closely tracing cues, in this case from etymological origins to physical settings, decade-old traditions to shared urban values, one geographical context to another, or one person to another. In discussions exemplifying the local vocabulary in Harkishandas Sheth ni Pol, the

spaces represent its people, individual mental constructs as well as shared associations, and a comprehensive worldview of the culture. This alternate perception is rather immediate, where I have reflected a nuanced description of life in *pol*s.

However locally fluent and familiar I have been with Gujarati culture; the perception of space might largely differ from that of a resident. The idea that my place is different from theirs, which Miriam (Steven Feld, Keith H. Basso 1996) elaborately talks about in her account of the Wamirians of Papua New Guinea, in this case, reckons how my perception of their place is in fact 'our place', where I base them on the commonalities and differences that are seen from where I stand. The ways of thinking about the spatiality of *pol*s beyond the two typological dichotomies of streets and open spaces and spanning them across a spectrum of qualitative perceptions are in fact a re-look at this sense of 'our' place within the *pol*s. Similarly, the question on the nuances in the meanings of open spaces of *chowk*, *chowkthun,* and *chotro* are addressed along these lines, where scale and logic are preceded by years of shared values established along with the names. The traditionally evolved perceptions of *chabutaro*, *thaalu,* and *parabdi*, where public space is centered around preserving as well as containing the natural forces, contrast our approach towards the contemporary public spaces in the cities. As snippets on *otlo*, *dehli,* and the case of *vaado-vaadi* most distinctly lay out the covertness in the perceptions by revealing the social constructs and connotations couched under the local expressions shared by the people, we know that these experiences are common outside the walled city too. It is through this perspective, that I grapple with some of the inexplicable complexities of the ideas constructed around space and culture that I was introduced to during my visits to the *pol*s.

Glossary for Gujarati Words

1. baarsaakh – The four wooden pieces of a door frame
2. chabutaro – A stand-alone structure to feed pigeons, commonly found in Ahmedabad *pol*s
3. chakla – A cross-road
4. chogaan – A wide and open space
5. choro – The core of a village usually open to all and unbuilt
6. chotro – A built common space
7. chowk – A courtyard within a house or at the scale of a city
8. chowkdi – A small courtyard typically within a house
9. chowkthun – The central open space formed between the built structures
10. dehli – A mansion for a renowned person
11. dehlo – A huge mansion
12. dehlu – A mansion for a renowned person
13. gali – A lane
14. ghanti - A flour mill
15. kabutar – A pigeon
16. khadki – A small door
17. khancho – A turning road/lane/street
18. kota – A kind of limestone
19. kuwo – A well
20. mahollo – A neighbourhood
21. moti – Big
22. nani - Small
23. otlo – A veranda
24. parabdi – A place for water
25. peepal – The sacred fig tree
26. pol – Typically, a nieghbourhood
27. pol no medo – The entrance to any neighbourhood
28. sheri – A street
29. taanku – An underground water harvesting well
30. thaali – A plate
31. thaalu – A place around a water source
32. vaada – Typically a vaado
33. vaadi – An unbuilt open space
34. vaado – A built space for gatherings
35. vaas – A nieghbourhood

Image Captions
Fig. 1. Source: Author. The entrance to Harkishandas Sheth ni Pol with *pol no medo* above the gate.
Fig. 2. Source: Author. The map of Harkishandas Sheth ni Pol with marked jurisdictions.
Fig. 3. Source: Author. Four ladies gathered on the *otlo* of a house during the evening hour.

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Biography
Khevna Modi is an Architect graduate from CEPT University, Ahmedabad where she first identified her inclination towards spatial studies through a deep inquiry and critical engagement with a question while keeping the geographical and cultural context in the foreground. Her Undergraduate Research Thesis titled 'Cultural Construction of Spaces through an Inquiry into Space-names: A Case of Gujarati Language in the residential public realm of the walled city of Ahmedabad' guided by Dr. Gauri Bharat is a culmination of the same interest in the academic sphere. Through her travel experiences during her internship in Tamil Nadu and Scholarship-based Exchange Program at ETH Zurich, she furthered her fascination by engaging in stimulating discussions over architecture, urban & territorial regions, culture, art, landscapes, and environment among others. Currently based in Mumbai, she works as a Junior Architect at Ranjit Sinh Associates and is currently undertaking her Masters of Science in Sustainable Design at Carnegie Mellon University, USA.

Past and Future of Townscape
For a Humane Urbanism

Molinari, Carla[1]; Spada, Marco[2]
1. Aglia Ruskin University, School of Engineering and the Built Environment, Chelmsford, United Kingdom, carla.molinari@aru.ac.uk
2. University of Suffolk, School of Engineering, Arts, Science and Technology, Ipswich, United Kingdom, marco.spada@uos.ac.uk

Abstract

The complexity of the term Townscape is linked to its authorship shared on the pages of the *Architectural Review*. The first article in the Townscape column was published in 1948 and was written by Gordon Cullen. In 1949 H. De C. Hastings wrote the editorial "Townscape" and thus officially opened one of the most critical campaigns promoted by the British magazine, which will continue for over twenty years thanks to various authors, and culminated in 1961, with the publishing of the book *Townscape* by Gordon Cullen.
A few years after the publication of Cullen's text, theTownscape agenda became the subject of intellectual battles between critics such as Colin Rowe and Peter Reyner Banham. Then, in the 1970s, the term began to be associated with new forms of historical revisionism until it became the theoretical justification of Poundbury and Nansledan's schemes promoted by then Prince Charles.
Some recent studies analyse the origins and developments of the Townscape's agenda (Mathew Aitchison, Clément Orillard). At the same time, no one has yet focused on the historical origins of the term or the future potential of this urban theory, which associates tradition with modernity and rurality with the city, focusing on the richness of the human scale and experience.
This research is based on a literature review of the term Townscape from the XIX century to the present. By selecting the most relevant publications and comparing the different meanings, this paper aims to reconstruct an awaited framework of the term, its evolutions, nuances, and future potential. The final aim is to suggest Townscape as a fruitful term to theoretically frame the contemporary challenges of urban design, providing possibly innovative and critically sound strategies for addressing the lack of sense of belonging of our townscapes.

Key words: Townscape, Architectural Review, Gordon Cullen, Picturesque, Urban Design.

1. An Introduction to Townscape: investigating the term's origins

It is not known who first coined the term Townscape, and there are undoubtedly several authors - including critics, architects, and urban designers - who have used it as their own over the years. This uncertain and shared authorship has perhaps partly contributed to amplifying the multivalence of the concept to the point of almost completely modifying its original meaning. "By the twenty-first century, over three decades past its decline, Townscape's meaning is anything but clear. […] the widespread perception that Townscape was anti-modern reveals how much has been forgotten about the campaign since its inception in the 1940s."[1]

This paper attempts to reconstruct a detailed picture of the term Townscape by focusing on the word, its meanings, and the potential that this concept can still reserve for the future of urban design[2].

The Oxford English Dictionary suggests 1867 as the first year in which the term appears in print about a "thoroughly characteristic Spanish Townscape" in the pages of *Hunt's Yachting Magazine*. A few years later, in 1880, the word appears in the text *The Figure Painters of Holland* by Ronald S. Gower, describing an urban landscape in a painting. And then again in 1889, in *A Tour in a Phaeton: Through the Eastern Counties*, by James John Hissey, who writes: "Why will not painters give us glimpses of some of the quaint townscapes (to invent another word) of our romantic, unspoilt English towns?".

It can be stated then that the term Townscape was invented towards the end of the 19th century to describe the urban landscape in the British context. Although sporadic, these first quotes already clearly identify some of the essential characteristics of Townscape. First, it is a concept linked to the visual and representational sphere, as the concept of the landscape itself is. Often, the term is associated with paintings, and when it relates to the physical environment, it usually refers to the experience of eyes. Secondly, there seems to be a close relationship between Townscape and the idea of characteristic, traditional: the urban landscape defined as Townscape is "romantic, unspoilt" and, therefore, it represents some original, local architecture.

In this sense, the original meaning of the term is highly effective and intuitive: Townscape indicates the possibility of conceiving urban space as a landscape, as an element with its own specific and unique identity, and as such, suggests it as an object that deserves to be studied, represented and designed. Nevertheless, its effectiveness and critical fame only became so later, on the pages of the *Architectural Review* (*AR*) under the guide of Hubert de Cronin Hastings[3]. Since the 1930s, the London magazine has dedicated itself to promoting and critically debating modern architecture. One of the most shared dilemmas of that period was the search for a national architectural identity that could reconcile the irreverent modern aesthetics with the more traditionalist essence of the English landscape and Townscape has been suggested for several years as a solution to the dilemma by the *AR*. Hastings gathered different authors and critics with this primary purpose: he wanted to promote the minimalist lines and revolutionary use of materials of modern architecture, but he was, together with most of the authors, suspicious of the modern utopistic approach to urban design. Furthermore, he enormously enjoyed eclecticism, as perfectly represented by the AR's private pub he created: the Bride of Denmark. Townscape provided the perfect opportunity to merge the British character of small towns and picturesque landscapes with the necessity of modern urban developments. The term represents, in this sense, a theoretical compromise associated with the period's societal and architectural historical changes.

2. Townscape and the *AR*

Although it is impossible to identify a single person as the author of the term, as already clarified, we can still be confident that this word was coined at the end of the 19th century and reinvented and promoted in the 1940s by the *AR* after years of heated debate on the limits of the urban design of the modern movement.

The term Townscape appeared for the first time on the *AR* in 1939, when J.M. Richards[4], the journal's longest-serving editor, published an article titled "Wisbech." However, throughout this article, Richards uses the term with little care or emphasis; he writes: "That universal Croydon towards which the townscapes of England are tending."[5] Townscape has yet to be defined as a practice but is used mainly as a noun, as a term to describe the English urban landscape. In any case, the dilemma of modern urbanity, of the universalization of an otherwise characterized and characterizing landscape, is already evident in Richards' text.

In fact, the conceptual potential of Townscape has already been partly explored on the pages of the London journal long before the term itself is finally defined and officially adopted as an agenda. The work of Nikolaus Pevsner, in particular, and Thomas Sharp, John Summerson, and several other authors gathered by Hastings had a shared aim to find alternative options to the modern design of urban spaces, starting from the rescue of the English architectural tradition. Articles such as "Price on Picturesque Planning" by Pevsner or "Exterior Furnishing or Sharavaggi: the art of making urban landscape" by Hastings, both published in 1944 on the *AR*, become emblems of this persistent attempt and ambition of redemption of the English landscape design, finally identifying the Picturesque as a critical method for an autochthonous development of modern architecture. Pevsner, more specifically,

dedicated several texts, including a posthumous-published book, to the Picturesque and its profound English ethos, starting from a thorough historical analysis of the term. Despite several authors theorising the Picturesque beginning from the 16th Century, it is indicative that the *AR* mainly refers to Uvedale Price. This is because Price was the first that theorised the Picturesque as an aesthetics category, independent from the Beautiful and the Sublime. Although neither Pevsner nor Hastings directly referred to Townscape as an aesthetics category, it is essential to note that both of them defined Townscape as the logical development of the Picturesque.

In 1948, the term Townscape appeared twice: in the book by Thomas Sharp, *Oxford Replanned*, published by the *Architectural Press* (*AP*), and on the pages of the *AR* to introduce the article by Gordon Cullen, "Legs and Wheels". A year later, in 1949, the *AR* again officially launched its "Townscape" campaign, with a cover and case book by Cullen and an opening piece by Hastings. From this moment on, Townscape takes on a much more complex meaning and becomes a practice, an agenda supported by several fronts.

3. Thomas Sharp, *Oxford Replanned*

Thomas Sharp is a town planner, and author of essential texts on the English urban landscape, including *Town Planning* published in 1940. He also writes some articles for the *AR* and actively collaborates in the Townscape campaign. Between Sharp, Hastings and Cullen, as between all people included within the sphere of the *AR*, various professional relationships are established. Therefore, it is no coincidence that Cullen is the author of the cover for two books by Sharp, *Oxford Replanned* and, later, *English Panorama*.

In *Oxford Replanned*, the author defines the term Townscape very authoritatively, even using the term "christened". Sharp writes, "[...] by an analogy with an equivalent art practiced by the eighteenth-century improver of land, it might be christened Townscape. Always remembering that a town is a mobile thing, that streets, like buildings, move as one drawn through them even if one is drawn on one's feet, whereas a photograph records a static object, it would be worth considering every illustration in this book on its merit as a piece of Townscape."[6]

The definition already contains several key elements that underlie a much more complex idea of Townscape than the one used until then. First, Townscape refers to the past – this is also a fundamental point for Hastings: the term is loaded with the value of historical continuity. It becomes the heir of an English identity. In this sense, the implied landscape – so significant that it does not need to be explicitly mentioned – is the ancestor par excellence from which Townscape was born and named. Sharp then focuses on the concept of movement and how a city is an object that cannot correctly be told with static elements because the buildings and streets move as we cross the space. This point, more related to understanding Townscape as an operative method, is closest to Cullen's vision, which he constantly reiterates with his magnificent drawings and short but effective words.

Still analysing Sharp's definition, we finally encounter a transformation of the term from a simple noun to describe some feature to a noun that implies action. Townscape is an "art"; it is a practice that aims to improve the town. This passage is as fundamental as it is difficult to sustain, and it is interesting to note how the various authors and promoters of Townscape then experimented with different ways to justify this idea, trying to explain how the theory can be transformed into practice. Sharp, precisely, does it as a perfect urban designer. *Oxford Replanned* opens and closes with glossy pages with black and white photographs and short essays that seem to come directly from the *AR*. However, this is a small part compared to the book's central section, which is dedicated, as suggested by the title, to a bold proposal to modify the urban space of Oxford, starting from a study of a new road system for cars and pedestrians. Here Sharp proposes a comprehensive examination of the city, of how it has changed over the last few centuries and how this change could be even more radical in the future, affecting those qualities of visual value and urban character which he precisely defines as typical of the art of Townscape. So again, modernity, in this case in the form of mobility, represents a threat to urban space, and Townscape is the answer to the problem. However, Sharp's method of using Townscape is specific and is that of the urban planner rather than a designer, who works on maps (some of which are beautifully represented and included in the book on double pages) and on masterplans[7].

4. Gordon Cullen, "Legs and Wheels"

This article by Cullen, usually not analysed, is particularly significant for many reasons. Cullen is younger than Hastings and Sharp, but since 1935 he has been collaborating occasionally with the *AR*, above all with the role of illustrator. In 1947 he became assistant art editor of the magazine. In the following months, he published two articles, "A square for every taste" and "Hazards", which focused on the quality of urban spaces from a pedestrian perspective and were printed on light-blue paper.

For some years the *AR* has been experimenting with an innovative graphic style. This style is primarily the will of Hastings, who transformed the *AR* into an avant-garde journal in those years, on par with the most prestigious architecture magazines in the world. Graphics become a fundamental means of transmitting content, and therefore there is an essential search for a specific language consistent with

the articles' philosophy. In this sense, the choice falls on an ambiguous yet compelling mix of styles, fonts, and colours, trying, on the one hand, to give space to traditional projects and ideas, on the other, to promote the revolutionary and diametrically different approach of modern architecture. In this sense, the graphics transmit the journal's philosophy and its authors: an idea of mixing styles and embracing the richness and diversity of the built environment. There are several people Hastings manages to attract to the AR to reinvent graphics. Cullen is one of them, and his induction as art editor (a figure that did not exist before) points to this goal.

The text of "Legs and Wheels", printed in 1948 on the same light-blue paper as "A square for every taste" and "Hazards", is the first article on the AR that is labelled with the Townscape banner. The article is short and focuses on urban land and how this is now occupied and dedicated only to cars. It is probably no coincidence that both "Hazards" and "Legs and Wheels" focus on problems of urban space related to traffic, like Sharp's book. Cullen briefly mentions pedestrian risk issues but then focuses on two points: "(a) the suppression of variety and character in the ground surface; (b) the invasion of the pedestrian reserves."[8] The two concepts are anything but trivial. The variety and character of the urban dimension are critical terms for the Townscape agenda, which are taken directly from Price's definition of the Picturesque. The defence of the pedestrian (of the man who has experience of the city by crossing its spaces) is a theme that seems to constantly return in Cullen's approach to Townscape. In addition, Cullen has a personal interest in human psychology. His words, diagrams, and drawings often focus on the realm of human, subjective urban experience[9].

The photographs accompanying the text are part of the well-established AR style, capturing black-and-white details of an unidentified urban landscape, images that are proposed as examples of situations that can be found in every English town. In the same way, the drawings by Cullen's hand also show urban scenes of common and possible urban glimpses that the reader is not given to know if they are real or invented. However, unlike photographs, used similarly by all the authors of Townscape (including Hastings and Sharp) [10], Cullen's drawings offer points of view based on the human experience. If the shots want to focus attention on elements of the urban space that are usually overlooked, and for this reason, they are mostly taken from non-natural or non-spontaneous points of view, the drawings instead show the perspective of the pedestrian. Cullen's famous quick yet effective stroke, as well as the very accurate choice of the urban frame to depict every time, help to create a visual apparatus that, from a simple representation, first becomes a story and then slowly design. Drawing in this sense is, to all intents and purposes, the operative part of Cullen, his way of transforming and putting Townscape into practice.

5. Hubert de Cronin Hastings, "Townscape: A Plea for an English Visual Philosophy Founded on the True Rock of Sir Uvedale Price"

With the 1949 text by Ivor de Wolfe (Hastings' pseudonym) the Townscape campaign on the AR officially opened. The cover of the issue and a second article, "Casebook", both authored by Cullen, are also dedicated to Townscape.

Hastings' text is dense, full of references from outside the world of architecture, and with a polemical tone. This is the characteristic style of Hastings' articles, always provocative as eloquent. Only one image accompanies the text: an opening photograph of a road detail well connected to Cullen's "Legs and Wheels", published only a few months earlier. The goal of the essay and its author is clear from the very first lines: "But the first requirement, the creation of a vocabulary, isn't a thing the artist himself ought to have to struggle with alone; it is rather a matter for the art critic, the historian, the poet – in fact, the man of letters […]"[11]. Hastings, therefore, a man of letters, sets himself the goal of creating this vocabulary for the landscape and its design and, after a long and reasoned discussion, concludes his text by proposing Townscape as a new and significant term.

The article can be divided into three main parts. In the first part, Hastings refers to an interpretation of national culture starting from ethical-political questions, citing, among others, Machiavelli, Rousseau, Hoffman, Locke and Plotinus. This hypothesis, which Hastings elaborated together with Pevsner for several years before and after the publication of this specific article, refers to the idea of an English democracy that he defines as "radical liberal". According to Hastings, the political tradition of the UK promotes a society that incites the expression of the individual as different and unique. On the contrary, "rational liberal" democracies, such as the French one, aspire to the freedom of the individual towards achieving a truth that is the same one for everybody, a shared, collective truth.

The second part of the article, on the other hand, questions the possibility that this characteristic of English society of aspiring to complexity and diversity can be found in the urban and landscape reality, in the "out there". Here, referring first of all to Price but also citing William Kent, Capability Brown, Palladio and Plato, Hastings suggests that the English sense of beauty (or sublime), nourished precisely by this philosophical approach, and does not aspire to an idea of uniform and compliant beauty, but on the contrary to seeking differences and variety. This aesthetic trend is found in Price's Picturesque, which therefore allows Hastings to trace a clear line of English tradition in the approach to the landscape[12].

Finally, in the last part of the article, the editor of the AR focuses on the concrete possibility of applying this distinctive national aesthetic and philosophical approach to the contemporary context of urban design. So again, the authors of Townscape invite us to imagine the term as a concrete possibility of action and practice. However, Hastings does not make the attempt himself and refers instead to Cullen's case-book, which follows his article, emphasizing how, in his opinion, the art of Townscape must start from the collection and understanding of precedents. "To bring the thing down to practical politics the section which follows tries to demonstrate in a purely token what the Case-Book idea applied to town planning as a visual art, termed by Thomas Sharp Civic Design and the Review, I think, Townscape. Technical questions can here be ignored, but it is not for this reason the subject is chosen, but rather because it demonstrates the modern conception of Landscape as the field of vision wherever and in whatever position happens to be."[13]

6. The critical (un)fortune and of Townscape

After 1949, the Townscape's agenda was officially launched on the AR. Hundreds of articles are written with its banner, in the first years signed by Cullen, but then also by many other authors. The campaign is one of the most successful of the AR but also one of the most controversial. The term Townscape gained further significant recognition and widespread usage with the publication of Gordon Cullen's influential book, "Townscape," in 1961. Subsequently republished in an abridged form as "The Concise Townscape" in 1971, Cullen's work synthesised his earlier articles on the AR in the 1950s. The book also hosts some additional texts by Cullen, which, however brief, deserve a more in-depth future examination. A few years later, Sharp and Hastings also published books whose titles focused again on Townscape: Hastings (under the pseudonym of Ivor de Wolfe) published "The Italian Townscape" in 1963, and Sharp "Town and Townscape" in 1968. Both the books, together with that of Cullen, offer new nuances, perhaps exaggerating in the enrichment of the term which, inexorably, will be emptied and trivialised from that moment.

Towards the end of the 1960s, in fact, something changed; the term began to be misunderstood and became the subject of heated debates. The most significant is perhaps what happens, again on the pages of the AR, between Colin Rowe and Reyner Banham[15]. The two acclaimed architectural theorists find themselves fighting with letters-articles, one of the many battles of the war between modern and postmodern. A war without winners (or perhaps without losers), which saw exciting moments and twists; like Rowe's cross-benching, which, according to Banham, after having supported the AR for years, then accuses the journal of defending vernacularisms.

As narrated by Aitchison, Rowe was always very critical regarding "the insufferable tedium of Townscape, the dreary accumulation of publish house chi chi, and the insipid neo-Regency aesthetics with which we have been blanketed since the war" [16]. Maybe also for this reason, when he published the essay "Collage City" in 1975 with Fred Koetter, the AR published a series of articles reviewing Rowe's work, most strongly criticising his text for lack of originality and what we would call today missing referencing. Nathan Silver, Charles Jencks, and Reyner Banham were among the authors accusing Rowe of copying ideas already published by others. Banham, in particular, entitled his article "De Wolfe the Author?" referring to Hastings as the main, first author of these ideas, since the publication of the "celebrated article 'Townscape… a visual philosophy founded on the true rock of Sir Uvedale Price', equally suspicious of universal utopias and equally delighted by the juxtaposition of fragmentary designs. And that was in the AR for December 1494. Professor Rowe's attitude to these ideas at the time was consistently hostile. […] Unless this leopard has genuinely reversible spots, Rowe's claims to authorship […] are far less convincing that those of 'Ivor de Wolfe'"[17]. Rowe published a letter answering all accusations, stating that his and Koetter's project started in the early 1970s.

However, this clash between these architectural theory's titans continued for years, and probably determined part of the critical (un)fortune of the term, which was slowly emptied of its theoretical and practical aspects and transformed into a restorationist or jingoistic label in order to foray the revival of Poundbury and similar schemes. The Townscape term, at this point, finally became the perfect, catching word to describe the New Urbanism tendency and King Charles's faux traditional towns, helping certain councils to defend the superficiality of rushed urban development projects[18].

7. Conclusions

The concept of Townscape underwent significant developments between 1948 and 1949, thanks to the contributions of Sharp, Hastings, and Cullen. This paper explored how these scholars expanded the scope of Townscape beyond its visual aspect, establishing it as a critical term in the history of architecture. Their innovative interpretation emphasized the integration of movement and visual experience of the urban landscape. Moreover, they advocated the notion of Townscape as an "art" or "practice" capable of shaping alternative futures and contributing to urban improvement. By doing so, they highlighted the active role that individuals, particularly architects and planners, should play in shaping the urban environment. In this way, Townscape represented the societal changes of the time,

moving from the aesthetics philosophical category of Picturesque to a collective, proactive possibility to intervene in urban space.

For these reasons, among the numerous authors who have written about Townscape over the years, Sharp, Hastings, and Cullen stand out for their significant contributions to reinventing the concept and proposing new values and meanings. While they shared a common intention to redefine Townscape critically, their perspectives differed in nuanced ways. Sharp's contribution lies in his rigorous approach to the discipline of urban planning, which emphasizes systematic and meticulous urban analysis for effective implementation. On the other hand, Hastings enriched the concept with social-political and historical-critical dimensions, highlighting the broader societal implications and contextual relevance of urban spaces. Lastly, Cullen's pivotal role involved translating abstract concepts into essential graphical representations and intuitively recognising the necessity of changing the design's scale and perspective.[19]

What can be the future of Townscape today? New studies are finally contributing to the understanding and analysis of its complexity, finally shedding light on the *AR* campaign and the various actors who took part in it. The common sense of the term remains linked to a partly historicist and characterising, rather than characteristic, idea of urban space. A quick search of the word online reveals its popularity and how it is used as a catchy title by design firms, urban development consultants, and even games. Although disappointing, this trivialisation also reveals what Hastings, Sharp and Cullen, first of all, have recognised: the effectiveness of the word and its immense immediacy. In this sense, Townscape can maybe still have some meaningful potential, maybe this time embracing the variety and complexity of the English tradition up to including the banal as the deep.

Notes

1. Mathew Aitchison, "Townscape: Scope, Scale and Extent," *Journal of Architecture* 17, no. 5 (2012), 627. In this article, Mathew Aitchison analyses the different voices that contributed to define the Townscape agenda and expresses an interesting perspective of why the concept lost significance during time.

2. Several recent studies have been recently published regarding Townscape agenda and its effects and development. Refer in particular to Erdem Erten, "Thomas Sharp's Collaboration with H. De C. Hastings: The Formulation of Townscape as Urban Design Pedagogy," *Planning Perspectives* 24, no. 1 (2009), 29-49.; Anthony Raynsford, "Urban contrast and neo-Toryism: on the social and political symbolism of The Architectural Review's Townscape campaign," *Planning Perspectives* 30, no. 1 (2015), 95-128; and the entire issue of the Journal of Architecture on Townscape edited by Mathew Aitchison, *Journal of Architecture* 17, no. 5 (2012).

3. Hastings was the owner of the Architectural Review and the Architectural Press, and editors of both for decades. For a more focused portrait of his controversial and powerful figure, refer to Mathew Aitchison, "Who's Afraid of Ivor de Wolfe?," *AA Files* 62 (2011), 34–39.

4. A thorough article has been recently published on J. M. Richards and his role as one of the AR's editors on the 1500th anniversary issue of the AR: Jessica Kelly, "Reputations: James Maude Richards," *The Architectural Review*, no. 1500 (2023), 14-17.

5. J.M. Richards, "Wisbech," *The Architectural Review*, no. 86 (1939), 236.

6. Thomas Sharp, *Town and Townscape* (London: John Murray, 1968), 36.

7. For a more comprehensive investigation regarding Thomas Sharp and his contribution to the development of the Townscape agenda, refer to Erten, "Thomas Sharp's Collaboration with H. De C. Hastings: The Formulation of Townscape as Urban Design Pedagogy," 29-49.

8. Gordon Cullen, "Legs and Wheels," *The Architectural Review* 104, no. 620 (1948), 77-80.

9. In the article, Clément Orillard, "Gordon Cullen beyond The Architectural Review: some new perspectives from his personal archives," *The Journal of Architecture* 17, no. 5 (2012), 719-731, can be found a well-documented investigation of Cullen's interest on human psychology, based on archival research.

10. It is important to note that the AR and the AP shared a massive photographic collection and all authors contributing to publications were able to use these images. In this sense, it should not be a surprise that several books and articles related to Townscape were in some cases illustrated by the exact same photographs.

11. Ivor de Wolfe [Hugh de Cronin Hastings], "Townscape: A Plea for an English Visual Philosophy Founded on the True Rock of Sir Uvedale Price," *The Architectural Review* 106, no. 636 (1949), 355–62.

12. The same principle has been expanded by Nikolaus Pevsner on several occasions. For instance, during his Reith lectures, entitled *The Englishness of English Art* and broadcasted in 1955.

13. Wolfe, "Townscape: A Plea for an English Visual Philosophy Founded on the True Rock of Sir Uvedale Price," 362.

15. A more detailed narration of the letters' exchange between Rowe and Banham can be found in Aitchison, "Who's Afraid of Ivor de Wolfe?", 34–39.

16. Colin Rowe, "Connel, Ward and Lucas," *Architectural Association* 73, no. 808 (1956), 163.

17. Reyner Banham, "De Wolfe the Author?," *The Architectural Review* 158, no. 944 (1975), 322.

18. For a recent and stimulating view regarding the contemporary debate around British new urban schemes, refer to Alistair Barr, "Behind the façade," *The Royal Society of Arts Journal*, no. 1 (2023), 40-43.

19. Cullen was a magnificent and well-recognised illustrator. Norman Foster, in the introduction to Gosling's monography on Cullen, wrote: "Cullen was like a wizard as with a few deft strokes he would make a social commentary". David Gosling, *Gordon Cullen: Visions of Urban Design*, (London: John Wiley & Sons, 1996).

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Biography

Carla Molinari is Senior Lecturer in Architecture and BA Course Leader at the Anglia Ruskin University. She teaches architectural history and theory, and Design Studio. Carla has a PhD in Theory and Criticism of Architecture, and has published on cinema and architecture, on the conception of architectural space, and on cultural regeneration. Before joining ARU in 2022, she taught at Leeds Beckett University, University of Gloucestershire, University of Liverpool, and University Sapienza of Rome. In 2020 she has been awarded a Paul Mellon Research Grant for her archival research on Gordon Cullen and in 2016, she was awarded a British Academy Fellowship by the Accademia Nazionale dei Lincei for her research on Peter Greenaway and Sergei Eisenstein. Carla's research engages with architecture and media, innovative interpretations of montage and cinematic design methods, theory and history of space, and urban narrative strategies.

Marco Spada is an Architect (PhD, ARB, SFHEA) and Senior Lecturer in Architecture at the University of Suffolk. He earned his PhD in 2016 from Sapienza University of Rome with a thesis on the relationship between memory and design in the rehabilitation of industrial plants. Marco specializes in urban narrative and complex sustainability, having studied at Roma Tre University, the University of Liverpool, and the Gdańsk University of Technology.

He carried out research activities in Rome, Tuscany, Poland, Kenya and the UK. Specialized in urban narrativity, sustainability and circular economy, he worked in Milan as Project Manager and Design Consultant. Last year, Marco has also obtained an EU Horizon Grant to study the impact of steel mills on local communities. Thanks to this funding, he was able to conduct field research, exploring how the steel industry has influenced the urban development of some cities in the UK and analysing the relationship between industrial plants and the local communities.

Kitsch
Learning from Ordinary Dreams of Architecture

Monaci, Elisa
Università Iuav di Venezia, Dipartimento di Culture del progetto, Venice, Italy, emonaci@iuav.it

Abstract

Kitsch eludes definition, it is often associated with a negative meaning, confused as a synonym for "bad taste". Looking at the state of the art, the concept is traversed by a dual condition; on the one hand, it appears largely outdated, belonging to social and cultural conditions long gone; on the other hand, it seems to have recently returned inside the contemporary debate, which, overturning its meanings, proposes kitsch as an attitude that permeates many spheres of life: running secretly behind the dominant design culture, it now draws many of our spaces undisturbed (Belpoliti, Marrone 2020).

From the perspective of architecture, declinations of the word emerge that are still operative today: kitsch can be synonymous with "waste" and with "overuse" (Eco 1964); in the seduction of the invisible, of what remains hidden in the private, it promotes the power of the already known, of the "essentially conciliatory" (Mendini 1979), to design "restful and moderate spaces" (*ibidem*); it pursues the desire to build *Splendid Houses* (Superstudio 1971) for "immediate identification" (Greenberg 1938); but in kitsch there is also the simulation and copying of elements that determine authentically false operations, there is the power of the irritating and the traumatic as a form of design and the need to narrate new stories, even looking at the *Unbelievable* (Hirst 2017).

Through a methodology that will intersect the analysis of the many etymological outcomes of the word kitsch with some contemporary design experiences (such as Architecten De Vylder Vinck Taillieu or the 2023 news about the construction of *Eternal City* a copy city of Samarkand), the contribution aims to define the legacy of kitsch and its possible design trajectories for the future, to retrace some commonplaces on architecture.

Key words: Kitsch, Architecture, Desire, Commonplaces, Narration.

1. Introduction

Kitsch eludes definition, it is often associated with a negative meaning, confused as a synonym for "bad taste". Looking at the state of the art, the concept is traversed by a dual condition; on the one hand, it appears largely outdated, belonging to social and cultural conditions long gone; on the other hand, it seems to have recently returned inside the contemporary debate, which, overturning its meanings, proposes kitsch as an attitude that permeates many spheres of life: running secretly behind the dominant design culture, it now draws many of our spaces undisturbed[1]. From the perspective of architecture, declinations of the word emerge that are still operative today: kitsch can be synonymous with "waste"[2] and with "overuse"[3]; "simulation and copying of elements"[4], "alteration of context"[5], it is a synonym for "authentically false"[6], in the seduction of the invisible, of what remains hidden in the private, it promotes the power of the already known, of the "essentially conciliatory"[7], to design "restful and moderate spaces"[8]; it pursues the desire to build *Splendid Houses*[9] for "immediate identification"[10]; but in kitsch there is also the simulation and copying of elements that determine authentically false operations, there is the power of the irritating and the traumatic as a form of design and the need to narrate new stories[11], even looking at the *Unbelievable*[12]. In these terms it becomes a parameter through which to systematise certain contemporary design dynamics and a possible tool through which to read the reality where we are immersed[13].

Apart from art and literature, it has been in 20th century architecture, that kitsch was most widely deployed through Postmodernist design and criticism (i.e., Charles Moore, Alessandro Mendini, Michael Graves, Ettore Sottsass). More recently, it seems to have become an exclusively negative term leading contemporary architects to make it their theoretical banner rarely ever. In fact, there is a kitsch, which we may call "traditional", that today has been appropriated by society, as a result, it is not recognised as kitsch anymore and it no longer has the deliberate and irritating effect that it had from the 19th century to the end of the 20th century. For example, garden gnomes or front-lawn pink flamingos – popular domestic kitsch embellishments – are emblems of the American class struggle and are objects that have become fashionable today and attracted a cult-like appreciation. The garden gnomes (or dwarf) have been reified as evidenced by Phillipe Starck's design for Kartell, a process by which the object has now been cleared through customs of approved consumer tastes. Moreover, kitsch was linked to the concept of middle class, which seems to have been lost in recent decades, thanks to class struggles and the loss of rigid subdivisions of social classes. Consequently, we now have multiple cultures, which means that kitsch is defined differently depending on the point of view of that particular social condition[14].

However, some characteristics of kitsch from the last century endure in the contemporary world. Today, kitsch is used as an adjective to describe a gap between the initial intention and the reality of something, no matter if we are talking about objects, space, culture, or politics. It follows that kitsch has an effect that depends on several factors: it depends on viewpoint; it differs according to the historical period; and geographical and cultural context. Moreover, kitsch does not have an absolute effect but rather results from the differentiation between reality and expectations that is registered by those who look at it. Recently, there has been a revival of certain design and urban operations that have characterised "traditional" kitsch – and which see in *Learning from Las Vegas* their theoretical cornerstone[15]. Three cases are worth mentioning: the recent copy in seventeen hectares of land of the city of Samarkand near the original, which bears the eloquent name of Eternal City and functions as a tourist and trade attraction without affecting the city's historic centre. Constructed by imitating the image of the iconic city, the copy preserves historical sites from too many tourists. Along these lines, the second case is the recent copy of the Roman Trevi fountain in Serra Nera near Sao Paolo in Brazil. The monument is built to pay homage to the country's Italian emigrants and to attract visitors who experience an "Italian holiday" just close to their home, in a play of decontextualization, unreality and irony. The third example concerns the recent work of disguising many representative buildings in the city of Skopje in order to transform them into a classical language and thus give them greater monumentality. Copying, disguise, decontextualization are some of the mechanisms that kitsch enacts in the project and that still pose a series of questions for architecture. These are the main actions used by Ludwig II in Baviera, who is known to be the first father of the term kitsch and of kitsch architecture: the use of non-authentic materials or materials used differently from the usual conventions, the predominance of intermingling of styles and architectural forms, the copying of castles and palaces from other countries (such as the castle of Herrenchiemsee imitating that of Versailles), the decontextualization of its architecture in relation to the surrounding landscape, the concealment of artificial elements mimicking nature (such as the grotto of Venus in Linderhof Castle, a copy of the Grotta Azzurra in Capri). But above all, the narration of stories was the main tool with which Ludwig's castles were built, not surprisingly he used to work with scenographers designers. Although the design actions implemented for the castles in Bavaria are not exclusive to kitsch, they help to better understand the sum of design actions that define such a multifaceted term.

My research on kitsch architecture starts than with an analysis of the major contributions written about kitsch, mainly in the artistic and literary fields. I have done this in order to extrapolate the terms and

the actions that could compose the design categories that kitsch establishes in contemporary architecture. In this essay, I focus on three etymologies, that deals with three corresponding design condition of the contemporary, and that allow me to identify theoretical and project trajectories for architecture. The aim is therefore not to re-cast the term within a new definition – moving the word from "bad taste" to something else – but rather to record the facets of this complex system of design actions and relationships within the contemporary contest, in which kitsch seems to be increasingly pervasive.

2. Methodology

The methodology is defined by a first phase of analysis and study of the definitions and etymological categories of the words, delving into its possible moments of birth, with the main aim of demolishing the negative meaning that the term has had to date. This operation has entailed extrapolating words and extracts from the bibliographic selection that broaden the spectrum of kitsch and allow a wider reading of it in the light of its role in architectural design.

From the process of extrapolating and selecting the extracts, three main categories were established that define three areas of design investigation. The categories have been synthesised to return three contemporary design issues that kitsch brings to light and make it operative again on the architectural project: the first category investigates the design of the ordinary, always looking inward, and is thus defined by a focus on the domestic (it is inside the private space, away from social conventions, that kitsch has more power: in the house the personal desire can have more space of action); the second category concentrates on the theme of falsification and reproduction of architecture, observing contradictions and drifts of the operation of simulation and copying (kitsch is confronted, in its very original meaning, with a copy of a drawing – a sketch – that aims at reproducing an "original" one); finally, the third category summarises the role and relationship of the project with its context, and is thus defined by a dual movement that in confronting what is outside tends to define its own inner identity (as ready-made art has thought us: what is relevant is the context in which the art work is placed that powers its meaning, making the difference between a common object or a piece of art).

The contribution aims to define the design legacy of kitsch and its possible design trajectories for the future, to retrace some commonplaces on architecture.

3. Inside the Term: Short Excursus on Kitsch

Before exploring the contemporary design legacy of kitsch, a brief journey into the origin of the word and its uncertain etymology is necessary. Various authors (such as Clement Greenberg, Hernst Broch, Walter Benjamin, Umberto Eco) have been confronted with the arduous task of defining the term kitsch, which has no single rigid definition or etymological origin. To summarise the definitions and meanings, Matei Calinescu partly encompasses the many meanings of the word: "The German word derives from the English 'sketch', mispronounced by artists in Munich and applied derogatorily to those cheap images bought as souvenirs by tourists" but also "Its possible origin should be looked for in the German verb *verkitschen*, meaning […] 'to make cheap'. […] The hypothesis links kitsch to the German verb kitschen, in the sense of 'collecting rubbish from the street'"[16].

Kitsch then originally appears as a way to escape from the conventions and from what was considered the high culture and art. One of the first analysis of kitsch in relation to art was developed by Clement Greenberg in his essay, *Avant-Garde and Kitsch*. In it, he develops the idea of looking at what is behind an avant-garde, i.e., kitsch, the cultural phenomenon that give voice to the popular and the commercial: "Kitsch, using for raw material the debased and academicized simulacra of genuine culture, welcomes and cultivates this insensibility. It is the source of its profits"[17].

From this moment, therefore, art, in its various forms, enters everyone's daily life and allows a continuous mixing of spaces and messages between artistic objects and everyday objects: "Leonardo's Mona Lisa is not kitsch, but so are the endless reproductions of it sold by the stationer. The same goes for Gropius' terraced houses or mass-produced furniture: quantity does not escape the banal. […] The first conscious symptom that a theory of the 'authentically false' may rightfully exist"[18]. This declination of kitsch thus assumes a dual relationship with the theme of necessity: kitsch is an element added outside the strictly necessary, it is often added a posteriori but, at the same time, it is always an element with a defined use and the result of an everyday and banal need: originally, kitsch objects are lighters, key rings, ashtrays, kitchen aprons, plates, cups. The addition of convenience, extra space and functions beyond the strictly necessary, are actions that contribute to an increase in the degree of comfort. This allows the individual, on the one hand, to conceive their private space as a place tailored to their personal needs and, on the other hand, to give voice to a desire for redemption and revenge against a predetermined, standardised space. The "easy catharsis"[19] that emerges within the definitions of kitsch implies an easy understanding of the message that the project carries, this aspect will be detailed further on in the etymological analyse.

Having articulated what kitsch is and does, I next investigate kitsch as a tool for architecture, the next three paragraphs will go deeper inside three etymologies outcomes of the world kitsch that

concentrates on three design actions of our present. The three case studies differ in having three different scales and ranging from the most private to the most public: a private house, a shop and a public space of a shopping centre.

4. Etymology Outcome I: Ordinary

An issue that repeatedly emerges from the definitions of kitsch defines a very close relationship with the private sphere and the small scale of the project. The flat, the garden, the backyard are the places within which personal needs reign without mediation, deprived of a relationship with an external context, more demanding in terms of regulation of behaviour and appearances. The sphere of the domestic, in accordance with some of the definitions of kitsch, is "essentially conciliatory"[20] because it holds together the practical needs of everyday life and the desires for luxury and appropriation of a place by the individual who uses it. Private space puts one at ease and welcomes, this aspect implies an "immediate identification"[21] with the place that conforms to one's personal needs and connotes one's way of living. As Alessandro Mendini states: "Kitsch (understood as a way of life tending to satisfy every new need) is described as essentially conciliatory; its preferences go to mediocrity, to what can be accepted without effort [...]; the spatial sphere of the man-kitsch is the flat"[22].

Kitsch in this case corresponds to what Moles calls the "not too much progress"[23], i.e. the need not to innovate too much through design, therefore to design moderate conditions. It thus concerns the design of those places of everyday life often left on the margins, such as the courtyards of apartment buildings, cellars, small gardens, wasted urban spaces. The operations of miniaturization within the scales of the domestic, of accumulation of references and of souvenirs, come together to delineate spaces that, chasing the desire of those who realise them, escape disciplinary codification, evade the rules, determine appropriations based on the imaginary and no longer on the real datum.

Among many projects that deal with the sphere of the domestic desire, detailed analysis should be made of the A12 home project in Madrid by Lucas y Hernández-Gil architects[24] (Fig. 1).

Fig. 1

The project involves conversion of a commercial space into a residential and office space on two floors covering 380 square metres. The two floors are complementary and opposing, especially in the choice of colours, reminiscent of Rothko as the architects stated, and are interconnected by a series of double

volumes and skylights and windows which increase the passage of light and the spatial relationship. The courtyard-garden, which "functions as an urban oasis"[25], is located in the basement and takes light from the atrium of the house through metal gratings. The garden is configured as an artificial landscape in which the plants are immersed in an orange pavement reminiscent of a desert or of a beach whose overly bright colour immediately reveals its artificiality and declares itself in the desire to alter space and context. The plants stretch out towards the grille and light and they contrast with the metal and the artificial lighting. The oasis, as the architects define it, is the metaphysical, surreal space to which the whole house turns to, and from which connections are made with the sleeping space. This aspect defines the comings and goings between the foreign and exotic place of the courtyard garden and the aseptic space of the bedroom, conceived as separate artificial landscapes which look at each other and contaminate each other in their uses and colours. This is also evident from the architects' words: "A landscaped interior English courtyard that receives light from the street filtered by a latticework creating a kind of oasis, a tropical garden of surreal character is connected to the lower level of the house"[26].

Kitsch in this project is conceived as a design tool capable of enhancing unused or unimportant spaces, such as the courtyard below the atrium facing the entrance on the street, almost a gully, which become a place in which to discuss the imagery of the home and increase resonance, thus enhancing spatiality instead of mortifying it. The mix of the artificial and the natural, contaminating plants and vegetation from different places, as contrasting materials defines a new interior landscape that can rethink the space of the domestic. The oasis of orange carpet, plants and metal directly overlooks the room, making it possible to sleep in an artificial desert, and contaminating a technical space, solving problems of humidity and lighting, with a classic domestic space in which the two looks at each other and define a new interior landscape: a controlled but at the same time imaginative domestic nature.

5. Etymology Outcome II: Simulation

Multiple definitions and etymological derivations link kitsch to the concept of the false and falsification of reality. The work that kitsch accomplishes through the negation of the authentic or through the reproduction of the original is thus emphasised. In some definitions, kitsch is exposed as an operation of disguise and masking of the original appearance of the artefact or operations of mimesis. Originally, the expression "selling something else instead of what was expressly requested"[27] implied an act of deception aimed at confusing reality. In the contemporary, on the contrary, kitsch no longer takes on the meaning of cheating, but is deliberately sought after inside design. Its character is voluntary and determines the triggering of new spatial conditions, in this sense it can be defined as "authentically fake"[28]. In Moles words: "Kitsch thus appears extraordinarily democratic: acceptable art, that which does not shock our spirit with a transcendence outside everyday life, with an effort that surpasses us. When art is out of measure, kitsch dilutes originality to a degree sufficient for everyone to accept it"[29].

The simulation aims at mimesis with the found environment to leave the status quo of the found condition unchanged, avoiding any form of disturbance, as we read again from Moles. However, the disguise enacted is never fully completed and resolved, it leaves margins of error or inaccuracy, suggesting the mismatch of the new elements in their new environment. The spatial dynamics of the simulations, through the "substitution of original materials", are aimed at constructing situations that give rise to "unnatural, inauthentic behaviour"[30]. Corresponding to this spectrum of definitions of kitsch is the investigation into the artificialization of elements, the copying and reproduction of spaces from elsewhere and the camouflage and disguise of architectural appearances. Its methodology of action constantly oscillates between the ambiguous and the overtly false, between the efficient reproduction that surpasses the original and the copy without origin. Kitsch falsifies and reproduces architecture and its elements to increase its ambiguity and makes use of the promiscuity between true and false, between authentic and reproduced.

The Twiggy shop by Architecten De Vylder Vinck Taillieu, realised in Gent in 2011, is particularly noteworthy concerning these aspects of kitsch (Fig. 2). The project involves the conversion of a 19th-century office building into a shop and apartment building. The pre-existence is kept apparently unchanged, a new building body housing the staircase juts out to occupy part of the courtyard space. This addition of volume is an opportunity for the architects to stage a sort of *trompe l'œil*: the new body appears to be a cut-out of the existing wall, an extrusion that does not take into account windows, cornices and other elements of the façade, that are reproduced by precisely following the "cut" of the projecting volume require[31]. The same procedure is repeated in the interior spaces where windows take the place of doors, removed ceilings float fireplaces and skirting boards that are now useless, old doors that are no longer needed are flanked by new openings in the walls, determining a choice to be made in order to cross the room, windows interrupt cornices and open up unexpected glimpses of double volumes. Everything seems to possibly change meaning and use, undergoing transformation, ready to question its own certainties and appearance: it is a place that question our commonplaces on architecture.

In the intervention, the boundary between the pre-existing and the new is continually challenged and redesigned, the mismatch between what was already there and what has been added is a sensation

that the architects intentionally construct in the visitor: simulation is pervasive. As the designers themselves state, it is desire that drives the transformation of space: "It is the ambition of the store that requires more, a store from top to bottom. This is a desire as well as a matter of practical objections. […] The old staircase connects the floors but also separates them. No single floor is visible from the other. It is desired that the house feels as a unity with a better visibility"[32].

From the simulation of what was already present, and the consequent triggering of a mutual mirroring between original and copy, the architects stage a reflection on possible design actions when operating in a historical context characterised by many previous histories. Operating on the borderline between the "unusual" / "uncanny" and the "recognisable" / "already known", the new intervention is hidden and at the same time perfectly evident: it is up to the eye of the observer to decide which narrative to follow.

Fig. 2

6. Etymology Outcome III: Decontextualise

Kitsch emerges in many of the definitions analysed as a term with a relationship of opposition and decontextualization from its context. The actions are for instance: temporal and spatial manipulation, the dimensional variation of its components and of the scale of the context, and the use of materials with chromatic and formal relationship with pre-existences. The definitions are full of operations such as: "anachronistic alteration of the context (chronological or ideological)"[33], "decontextualization"[34], "inability to blend the quotation into the new context"[35], "overpowering the context"[36] which constitute a reference to the relationship that kitsch establishes with its environment. Dorfles explains the approach of kitsch to its surrounding: "Decontextualization of a sign as a means of enhancing the effectiveness of an artistic message: poetry, music, painting, often make use of this artifice of removing a work of art or part of it from its normal context and placing it elsewhere, thus alienating the message and increasing its informative power"[37].

Decontextualization allows the project's narrative to be enhanced over the real datum of the space, reality is thus made interpretable, the place is open to interpretation in different senses, and so what matters is the imagery that the kitsch action superimposes on it, the metaphor that overcomes the vicissitudes of the place. These overlapping metaphors are used in the recent Tainan Spring project

completed in 2020 by MVRDV, with The Urbanists Collaborative and Progressive Environmental Inc. in the city of Taiwan (Fig. 3).

Fig. 3

The intervention transfigures the 54,600 square metres of a former shopping centre built in the 1980s into an urban lagoon, a rewriting of the many copies of Venice with the absence, in this case, of its architectural symbols in favour of the reproduction of some of its spatial dynamics. The lagoon is connoted by a fabric of sand dunes that articulate the large pool of water, the project makes use of the introversion of the courtyard space that is created inside the shopping centre as an external place, but one that is separated from the urban context.

The image that is created is that of an abandoned space in which the lagoon has re-emerged from underground by chance due to natural events and to the course of time. The artificiality of the project is total: apart from the vegetation installed in a few well-defined spots, the dunes are artificially constructed and equipped with a vaporiser and a system for raising and lowering the water – which is also artificially clear in colour – to simulate a natural trend of the tide, responding to the seasons and weather forecasts.

The project plays on a double field of interpretation. The characteristic of unexpectedness and estrangement created by the internal conformation of the intervention makes the behaviour of the people modify, who therefore move and enjoy the space as if in a place by the sea, on holiday. The place seems to be very far from the urban one they have just left when they crossed the door of the building, triggering a desire for elsewhere. The unexpected change in the conformation of the space, mainly due to the raising and lowering of the pool's water level, determines a degree of adventure and uncertainty that defines a verisimilitude with a natural environment, a form of *mimesis* and reproduction that recalls 19th-century landscape practices or, more recently, the great American theme parks. On the one hand, therefore, reality is imitated to the point of reproducing even its degrees of uncertainty and danger; on the other hand, the obviously circumscribed and artificial context tends to make the space resemble a playground, defining an inseparable duality between adventure and reassurance, between hyper-reality and dream.

The translation to the East of the concept of reuse and connection with history that is typical of the European continent is one of the elements on which the Dutch architects' project plays, defining a decontextualization and a geographical vector that imprints a design mode on another continent[38]. The project thus works on the forcing, even ironic, re-emergence of traces from Tainan's history, such as the relationship with water and with the natural landscape just outside the city, which is re-proposed through vegetation and a tamed water. At the same time, this European-style design approach is contaminated and enriched by the imagery of a playground and artificial nature, which has been widespread on the Asian continent. The collision of the two design approaches defines a new

trajectory in which reality and imagery add up and blur, defining an impossibility of separation between intentionality and involuntariness in the design process.

7. Conclusion: design/desire

The journey inside this untranslatable and contradictory term shows a constellation of possible declinations rich in meanings and tools for the contemporary. Questioning kitsch and its design actions allows us to also question certain dynamics that run through our private and public spaces in order to redesign them accordingly. At the end of this short journey, we are certainly far from the reductive meaning of "bad taste" that the word has had for a long time, and we begin to re-evaluate it as a useful term to reinsert within the architectural vocabulary.

It is from the collision of different metaphors that kitsch comes to redesign the spaces of individual and collective desire, to stage ambitions and imaginaries, conflicts and tensions, as well as dreams and fantasies: actually, it is an irritating term precisely because it is generous. Through "restful and moderate" actions, apparently naive and of *loisir*, it brings out the substratum of the hidden desires of all of us and puts them in the form of a constructed space, visible to all. In these terms, then, the narration of space is what enhances the desire and the imaginary one has of that same place. There is always a choice to be made, either to believe the story told, to let the imaginary prevail over reality, or to use the space in a functional way, as a use value. It is a choice that is made in a double phase: the first is the moment of designing the story and the space, the second phase is that made by each inhabitant in deciding whether to follow the narration or the use value of the space. After all, this is what happens with every kitsch object: the Eiffel Tower keyring is a souvenir that allows its owner to make a daily trip to somewhere else, it is a symbol, otherwise, on the contrary, it is the tool that allows him to easily retrieve his house keys, it is a simple element of use. As is the case with A12 house, where the underground space can serve only for the ventilation of the bedroom or it can become a place within which to make a journey to an elsewhere, the same principle applies to the artificial lagoon of Tainan Spring and the inner courtyard of Twiggy Shop.

This is the mechanism enacted also in the exhibition of the wreck of the *Unbelievable* by Damien Hirst – which let us return to the beginning of our discourse – where the visitor makes a choice between believing what is displayed in the museum or registering the gap between the fictitious narrative and reality. At the same time, it defines the need to design new stories that are the trigger of the architectural project and that allow for the construction of new imaginaries for the space. Kitsch is the tool that can "tell stories", as we have seen from some definitions of the word, and in doing so it overcomes the factual condition of space, designing desires.

The kitsch narrative of the project introduces the disjointed montage of different places and times, reinforcing this intrinsic characteristic of each space to become a world in itself and to impose its own narrative. By blurring the boundaries between reality and imaginary, and between authentic and reproduced, the narrative constructs *new landscapes* that are the result of both close-up glances at the places to be redesigned and long-perspective glances at impossible or unattainable spaces, which converge to define new configurations of architecture. Now that the contemporary increasingly seems to show how "the 'all true' is identified with the 'all false'"[39], kitsch reveals itself as one of the possible strategies of action on reality. Kitsch is therefore about added volumes that mimic the context, desert oasis inside the bedroom, lagoon in the neighbourhood: it is architecture about *desires*.

Notes

1 Marco Belpoliti, Gianfranco Marrone, eds., *Kitsch* (Macerata: Quodlibet, 2020).
2 Matei Calinescu, *Five faces of Modernity: Modernism, Avant-Garde, Decadence, Kitsch, Postmodernism* (Durham: Duke University Press, 1987), 234-235.
3 Umberto Eco, *Apocalittici e integrati* (Milano: Bompiani, 1964), 100.
4 Clement Greenberg, "Avant-Garde and Kitsch" in Idem, *Art and Culture* (Boston: Beacon Press, 1961), 22. The essay first appeared in "Partisan review", no. 6, 1939; Yves-Alen Bois, "Kitsch" in Idem, Rosalind Kraus, *Formless. A User's Guide* (New York: Zone Books, 1997), 114-122.
5 Gillo Dorfles, *Il Kitsch. Antologia del cattivo gusto* (Milano: Mazzotta, 1968), 19.
6 Alessandro Mendini, "Introduzione. Per un'architettura banale" in Abraham Moles, *Il Kitsch. L'arte della felicità* (Roma: Officina, 1979).
7 *Ibidem.*
8 *Ibidem.*
9 *Superstudio. Opere 1966-1978*, ed. Gabriele Mastrigli (Macerata: Quodlibet, 2016).
10 Greenberg, "Avant-Garde and Kitsch," 26.
11 Belpoliti and Marrone, eds., *Kitsch*.
12 Damien Hirst, *Treasures From the Wreck of the Unbelievable*, ed. Elena Guena (Venezia: Marsilio, 2017).
13 Kitsch was the subject of the PhD thesis discussed in April 2022 at Sapienza University of Rome entitled *Kitsch Landscapes. Artifices and Nature In Contemporary Design*.
14 On the complex relationship between kitsch and society, see at least: Dorfles, *Il Kitsch*; Belpoliti and Gianfranco, *eds.*, *Kitsch*.
15 Venturi Robert, Scott Brown Denise, Izenour Steven, *Learning from Las Vegas* (Cambridge MA: The MIT Press, 1972).
16 Calinescu, *Five faces of Modernity*, 234-235.
17 Greenberg, "Avant-Garde and Kitsch," 9-10.
18 Mendini, "Introduzione. Per un'architettura banale".
19 Calinescu, *Five faces of Modernity*, 227.
20 Mendini, "Introduzione. Per un'architettura banale".
21 Greenberg, "Avant-Garde and Kitsch," 26.
22 Mendini, "Introduzione. Per un'architettura banale".
23 "As a universal, well-known and widespread concept, the term Kitsch corresponds to a style that was present at the moment of its aesthetic genesis, to a style that makes one feel the absence of any style; it corresponds to a function of comfort that has been added unnecessarily to the traditional functions of the object; it corresponds to a 'but not too much' in progress." Moles, *Il Kitsch*, 27.
24 Among the domestic space projects nominated for the 2021 Mies van der Rohe award, see https://www.miesarch.com, accessed May 6, 2021.
25 See project's description in https://eumiesaward.com/work/4674, accessed May 6, 2021.
26 *Ibidem.*
27 Moles, *Il Kitsch*, 27.
28 Mendini, "Introduzione. Per un'architettura banale".
29 Moles, *Il Kitsch*, 46.
30 "In attributive or predicative function (and usually with a lower case initial): *k. taste*, *k. furnishings*, *k. objects*; extensively, referring to a person, *being k.* (and analogously *attitude*, *behaviour k.*), not to be oneself, to assume unnatural, inauthentic attitudes or behaviour, to dress in a conspicuously eccentric manner of dubious taste, to follow a fashion." Treccani Online Dictionary accessed February 20, 2022.
31 It is precisely the staircase that provides the opportunity to design an addition of space between surrealism and the play of irony with history. See in particular: Francesca Belloni, "Ceci n'est pas un escalier. Twiggy e il surrealismo di Architecten De Vylder Vinck Taillieu | Ceci n'est pas un escalier. Twiggy and the Surrealism of Architecten De Vylder Vinck Taillieu," *Vesper. Rivista di architettura, arti e teoria | Journal of Architecture, Arts & Theory*, no. 8 (Spring-Summer 2023): 52-61.
32 See https://divisare.com/projects/237926-de-vylder-vinck-taillieu-jo-taillieu-jan-de-vylder-inge-vinck-filip-dujardin-twiggy, accessed April 30, 2023.
33 *Kitsch* in Treccani Online Dictionary.
34 Dorfles, *Il Kitsch*, 19.
35 Eco, *Apocalittici e integrati*, 110.
36 *Ibidem.*
37 Dorfles, *Il Kitsch*, 19.
38 One registers this design intention especially from the words of Winy Maas: "In Tainan Spring, people can bathe in the overgrown remains of a shopping mall. Children will soon be swimming in the ruins of the past." www.mvrdv.nl/projects/272/tainan-spring, accessed December 10, 2022.
39 Umberto Eco, *Nel cuore dell'impero. Viaggio nell'iperrealtà* in Idem, *Dalla periferia dell'impero. Cronache di un nuovo medioevo* (Milano: Bompiani, 1977), 17.

Figures

Fig. 1. Lucas y Hernández Gil, A12 House, Madrid 2019. Ph. José Hevia.
Fig. 2. Jan De Vylder, Inge Vinck, Jo Taillieu, Twiggy Shop, Gent 2011. Ph. Filip Dujardin.
Fig. 3. MVRDV, Tainan Spring, Tainan 2020. Ph. Daria Scagliola.

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Biography

Elisa Monaci Architect and PhD. She is a research fellow at the Ir.Ide Research Infrastructure of Department of Architecture and Arts, Università Iuav di Venezia. She obtained her PhD at Sapienza University of Rome (2022) with a thesis on the theme of kitsch in architectural and landscape design. Since 2018 she is a member of the editorial staff of the scientific journal "Vesper. Rivista di architettura, arti e teoria | Journal of Architecture, Arts & Theory". Since 2020 she is part of the Iuav research unit for the PRIN "Sylva" and the Iuav research unit "TEDEA. Theories of architecture". The results of her research have been presented at national and international seminars and conferences and published in scientific journals and in volumes published by Libria, Mimesis and Quodlibet, among others.

Going Back Home/House
Unravelling Linguistic and Existential Differences

El Moussaoui, Mustapha

Free University of Bolzano, Assistant Professor, Faculty of Design and Art, Bolzano, Italy, mustapha.elmoussaoui@unibz.it

Abstract

The concept of "inhabiting" a space or a "dwelling" has proven contentious in architectural theory and practice. Although the existential significance of dwelling in a space has been innate in humans since the beginning of time, only in the mid-20th century it was highlighted philosophically by Martin Heidegger. The conference paper "Building dwelling thinking" by Heidegger is an important philosophical work that inspired architects. The philosopher looked up the word's etymology to get at its core meaning and use. As an etymological archaeologist, Heidegger worked back and forth in the core meaning of the word until he connected it to, Being-in-this-world and Being-towards-death. Through an analysis of the Arabic parables "Maskan" and "Manzel," this study aims to provide a more nuanced explanation of the word "dwelling" by drawing connections between the word's etymological finding in Heidegger's philosophy and the term's meaning in the Arabic language and culture. In this paper, I examine architectural typologies that corresponded to both existential meanings according to inhabitants of a certain region.

Key words: Dwelling, Manzel, Arabic, Heidegger, Being-towards-Deaths.

1. Introduction

On the surface, it may appear as a straightforward assumption that the primary function of any structure is essentially to provide a habitat for human beings. However, Martin Heidegger, the renowned philosopher, presents a differing perspective. He challenges the widely accepted notion by arguing that not all structures or buildings are necessarily created for human dwelling. This is evidently the case for structures such as factories, offices, and other non-residential establishments.

In a significant discourse given at a conference in Darmstadt in 1951, Heidegger[1] introduced the idea of "building dwelling and thinking." This seminal work has had a profound influence on 20th-century thinking due to its innovative approach to interpreting architecture and the nuanced act of inhabiting a space. The concept was revolutionary as it marked a shift from the traditional thinking of architecture as merely a physical phenomenon to the more abstract concepts of being and dwelling.

In the present era, contemporary architectural discourse borrows extensively from Heidegger's text, primarily revolving around the conceptual understanding of building and dwelling. This theoretical perspective treats these two elements as largely abstract forms of being, often disregarding the tangible presence of people inhabiting these spaces. It would be an oversimplification, according to Heidegger, to equate the term 'dwelling' with mere habitation of a space. He maintains that we have lost touch with the genuine essence of dwelling, as we have strayed away from the fundamental understanding of being in its most original sense.

Heidegger's philosophical works often hinge upon the presupposition that the more profound our explorations into the foundational layers of language, specifically in Greek and German, the closer we get to the authentic meanings of words. This perspective is believed to unlock a greater understanding of reality.

A central term Heidegger scrutinized was 'dwelling.' He initiated his exploration with an inquiry into the German word "Bauen," which translates as 'building.' According to Heidegger's understanding, the act of building, or "Bauen," is intrinsically tied to the concept of dwelling, or "Wohnen." This foundational assumption allowed him to sidestep any explicit architectural expressions and dismiss the physical act of dwelling in buildings as secondary to the broader philosophical discourse.

Applying a Heideggerian lens to the phenomenon of dwelling as it is understood through Arabic parables, one may draw interesting conclusions. This examination, rooted in the etymological essence of the word, allows for a different interpretation of 'dwelling' in the Arabic linguistic context. Understanding the term 'dwelling' within its indigenous cultural context provides valuable insights into the fundamental meaning of architecture within that culture.

The exploration begins by examining the etymology of 'dwelling' as found in the Qur'anic text, considering that the Quran is viewed as the grammatical origin of the Arabic language. Following this, the findings from a survey on the essence of the word 'dwelling' and its meaning in a contemporary cultural context will be reviewed and analyzed. Through this comprehensive investigation, one can hope to gain a more nuanced understanding of 'dwelling' as a philosophical concept, beyond its traditional architectural connotation.

2. Building, Dwelling, Thinking

In the distinctive lens of Heidegger's philosophy, the concept of 'dwelling' is explored with an exquisite depth of understanding. His lecture, "Building Dwelling Thinking," serves as a platform where he puts forth the question, "what is it to dwell?" In his exploration of this question, Heidegger attempts to delineate the distinction between a workspace and the actual space of dwelling. To him, the differentiation fundamentally rests on our perception of space, a notion that shapes our day-to-day experiences. Heidegger elaborates on this concept using a variety of examples. Structures such as bridges, hangars, stadiums, and power stations are undoubtedly buildings, but they do not qualify as dwellings. Similarly, railway stations, highways, dams, and market halls are constructed entities, but they don't serve as places of dwelling. Nevertheless, these non-residential buildings exist within the domain of our dwelling. This domain, extending over these edifices, is not strictly confined to the dwelling place. For instance, a truck driver may feel at home on the highway without it being his shelter. A factory worker may find a sense of familiarity in the spinning mill, without it being her dwelling place. The chief engineer may feel at ease in the power station, yet he doesn't dwell there. These buildings accommodate humans, they are inhabited, but not dwelled in (Heidegger 1971, 145).

In a contemporary context marked by a housing shortage, residential buildings do offer shelter, and modern houses might be well planned, affordable, airy, and bright. However, do these structures guarantee the act of dwelling within them?

Heidegger's deliberations lead to his philosophical concept of 'nearness.' He observes that with technological advancements, distances in both time and space have been drastically reduced. Today, one can reach distant locations overnight by plane, which in earlier times, took weeks or months of travel. However, this relentless minimization of distances doesn't necessarily translate into nearness. According to Heidegger, nearness is not about physical proximity. A person can inhabit a building on a

daily basis without experiencing a sense of homeliness or nearness to it. To dwell in a house implies more than just spatial occupation; it involves a sense of belonging, of finding a familiar place within its confines [2].

Heidegger further contemplates the contemporary connotations of the words "residential" and "housing," hinting at the possibility that these terms now refer more to the system of production rather than their relationship to the people who inhabit these spaces. To him, this shift in language mirrors the production system wherein developers construct living spaces for a market of unknown consumers. This practice, he argues, is diminishing the fundamental essence of dwelling, as building should not merely be perceived as a process for producing consumer goods. The present-day connection between building and dwelling hints at a stark contrast between the past and the present.

Heidegger encapsulates his thought as, 'For building isn't merely a means and a way towards dwelling – to build is in itself already to dwell'[3]. This statement implies that the act of building is not solely a pathway leading to a dwelling, but the very essence of dwelling itself. The very act of construction is intrinsically tied to the deeper philosophical understanding of dwelling[4].

3. Etymology

In Heidegger's philosophical perspective, an authentic relationship between building and dwelling can be discerned in the etymological origins of these words. He postulates that these two terms, in Old German, share a common root. This realization didn't astonish Heidegger, as he observed that both terms were initially understood as synonymous concepts.

Heidegger elaborates, stating, "Bauen originally means to dwell." He argues that where the term "bauen" retains its original sense, it also encapsulates the extent of the concept of dwelling. He reveals the etymological connection between "bauen," "buan," "bhu," "beo," and our contemporary word "bin," as in the phrases "ich bin" (I am) and "du bist" (you are). Hence, according to Heidegger, "ich bin" and "du bist" convey more than mere existence—they imply "I dwell" and "you dwell," respectively. Thus, human existence on Earth is framed as "buan," or dwelling[5].

Moreover, Heidegger posits that "bauen" not only signifies dwelling but also encapsulates the meanings of cherishing, protecting, preserving, caring for, tilling the soil, and cultivating the vine. This rich connotation endorses the idea that the act of living in a house and nurturing it is a profound affirmation of being. Heidegger observes how contemporary usage of these words—building as construction and dwelling as living—has significantly altered our perceptions and behaviors. Nevertheless, when merged, building and dwelling remain central to human existence. The existential phrases "I am" and "you are" underscore the idea that building and dwelling are integral to our existence. In essence, the process of constructing a dwelling and nurturing the land becomes an acknowledgment of human existence in various languages.

After exploring the etymology of "bauen," Heidegger delves into the related term "wohnen," which translates as "dwelling." The Old Saxon "wuon" and the Gothic "wunian," like the old term "bauen," signify remaining or staying in a place. However, "wunian" further delineates the nature of this remaining—it denotes being at peace, being brought to peace, or remaining in peace. The term for peace, "Friede," signifies freedom, preservation from harm and danger, safeguarding. Therefore, the act of freeing is, in essence, an act of sparing[6]. Hence, while "bauen" symbolizes an existential reassurance through building and cultivating, "wohnen" associates a sense of tranquility with the act of dwelling. At this juncture of the investigation, an examination of Arabic parables offers an opportunity to draw comparisons and explore relations between etymological and linguistic origins.

4. Arabic Linguistics

Embarking on the exploration of the word "Dwelling" in Arabic, we find that it is most commonly equated with the term "Māskan" in a straightforward etymological interpretation. However, a deeper etymological inquiry into the essence of "Māskan" reveals compelling insights. This Arabic term is derived from the word "Skoon," which signifies remaining still, maintaining calm, and achieving freedom from discomfort or pain[7].

The Arabic language recognizes any analgesic as "Musāken," a verbal phrase denoting the action of providing relief or the state of pain alleviation. Moreover, the verb "Askana" can refer to the act of extinguishing or dousing, as in the phrase "Askana Al-Nar," which means "to put out the fire."

A significant aspect of the Arabic language that resonates with this term is the concept of "Sokoon." A modulation symbol used widely in Arabic, the "Sokoon" is a small circle placed above letters intended to be silent or un-pronounced " ° ". It is one of five modulation symbols facilitating the pronunciation and comprehension of Arabic words.

Additionally, the plural form "Masākeen" is employed to denote helpless individuals who lack the means to sustain their daily lives. Interestingly, the term for dwelling places in Arabic is also "Masāken," which is the plural form of "Maskan." In the Quran, the usage of "Maskan" offers a nuanced understanding of dwelling. Chapter 7, verse 189 of the Quran includes the mention of "Maskan" in the phrase "وَجَعَلَ مِنْهَا زَوْجَهَا لِيَسْكُنَ إِلَيْهَا" or "It is He who created you from one soul and created from it its mate that he might dwell in security to her"[8]. This reference enables us to comprehend that the concept of dwelling transcends the physical constraints of architecture, extending into the emotional and mental realms. The feeling of dwelling, or being at ease from pain, is a psychological state that individuals universally aspire to attain. Therefore, the state of relief, or "Maskan," is not confined to the physical architecture but extends into the emotional domain, as illustrated by the relationship between couples.

In Arabic parables, another term used for a house is "Manzel." This word is derived from "Nazal" and "Nozol," implying to settle or descend. Intriguingly, "Nozol" is also employed in the context of transcendental knowledge, symbolizing divine wisdom descending from the heavens to God's chosen individuals or prophets. Despite "Manzel" serving as a representation of a house, it does not encapsulate the emotional depth of inhabiting a space as "Maskan" does. While "Manzel" signifies physical inhabitation of space, a quantifiable entity, "Maskan" exemplifies the metaphysical aspect of an inhabited space. It refers to a spatial dimension that the soul familiarizes itself with, irrespective of its ambiguous scale. A "Maskan" is not necessarily delineated by physical boundaries. Instead, it might be identified by poetic elements such as a distinct smell, texture, a woven pattern, or an intimate presence embodying the space [9].

Drawing from Gaston Bachelard's reflections on the poetics of space, the concept of "Maskan" can be likened to those " the house shelters day dreaming, the house protects the dreamer, the house allows one to dream in peace. Thought and experience are not the only things that sanction human values. The values that belong to daydreaming mark humanity in its depths." [10]

7. Throwness into existence
In 'Being and Time,' Martin Heidegger introduces an intriguing concept known as 'Geworfenheit,' often translated as 'throwness.' This complex philosophical notion aims to describe the predicament of human existence as being 'thrown' ('Geworfen') into the world. 'Geworfenheit' explores the enigmatic nature of 'Dasein,' a term central to Heidegger's philosophy representing the conscious being or presence. Heidegger posits that 'Dasein' inherently intertwines the past and present aspects of an individual's existence. Specifically, the notion of 'Being-toward-death,' which refers to the acknowledgment of one's finite existence, integrates the past into the continuum of 'Dasein.'
Thus, understanding the multifaceted concept of 'Dasein' is tantamount to recognizing the condition of 'Geworfenheit,' or 'Throwness.' It involves acknowledging the present form of one's existence in all its complexity, complete with all its attendant frustrations, sorrows, and sufferings.

Heidegger argues that these challenges and frustrations arise primarily from social norms, political contexts, kinship obligations, and duties that individuals do not choose but find themselves thrown into. The core concept of 'Geworfenheit' illuminates how the unchosen past becomes an integral part of one's existence, thereby influencing the lived experience of 'Dasein.' However, Heidegger insists that the past, while shaping our milieu, is neither deterministically binding nor obligatory. This understanding results in the nuanced notion of 'Geworfenheit.' In a peculiar turn of thought, Heidegger's concept of 'throwness' frames human existence within a paradoxical context: While individuals are cast into unchosen circumstances, these very conditions also offer a pathway to freedom. Thus, 'Geworfenheit' embodies the inherent contradictions and potentialities of human existence as viewed through the lens of Heidegger's philosophy.

8. Comparing Linguistic differences
Heidegger's concept of 'Geoworfenheit,' or 'throwness,' as he presents it in "Being and Time," captures the human existential condition of finding oneself involuntarily situated amidst social conventions, politics, familial responsibilities, and duties. This unchosen plunge into existence triggers a range of hardships and struggles, marking the human experience.

In an intriguing complementarity, the Arabic term for "Dwelling," "Māskan"—with its etymological roots in "Skoon," meaning relief or respite from pain—offers an antidote to this existential 'throwness.' The term "Māskan' encodes a vital mechanism for coping with the struggles implied by 'Geoworfenheit': by providing a refuge or sanctuary from the outside world, a dwelling place (or even a companion) becomes a site of relief and respite, a comforting bulwark against the hardships of existence.

This concept is echoed in the German word 'Wohnen,' which captures the essence of dwelling as an act of finding peace and stillness. Being in a state of "skoon," or calm, is thus associated with the retreat to these comforting spaces, a reprieve from the constant challenges of the external world.
The concept of 'Being-towards-death,' central to Heidegger's philosophy, frames human existence as a continuous cycle: moving between the harsh realities of the external world and the comfort and solace offered by our internal, personal spaces of dwelling. Each retreat into the comforting interior of one's "Māskan" is an act of relief from the incessant pressures of existence, a temporary respite from the unending process of 'Being-towards-death.' Thus, the Arabic concept of "Māskan" and Heidegger's 'Geoworfenheit' together illuminate the human tendency to oscillate between facing the world's hardships and seeking refuge in familiar and comforting dwelling places.

9. Conclusion
Inhabiting a space, a fundamental human necessity, is articulated through various terminologies across cultures. These terms, born out of the necessity to name specific actions, have evolved into words imbued with deep emotional resonance. Such linguistics represent a rich trove of cultural and emotional context for any word or action.
In his work, Heidegger delves into the etymology of words to uncover their essential meaning, tracing back the root significance of words like 'bauen' and 'wohnen' to grasp the nuances of building and land cultivation. Similarly, in this study, we explore the word 'dwelling' in the context of Arabic parables, aiming to unearth its intrinsic essence.
Heidegger posits that the terms 'wohnen', and 'bauen' were originally synonymous, encapsulating both dwelling and existence - a concept echoed in Old German through phrases like 'ich bin', 'du bist', or 'I am', 'you dwell'. Each culture harbors its own linguistic peculiarities, with specific words often embodying a certain emotive intensity.
The Arabic term for dwelling, "Māskan," roots back to mean peace, silence, and freedom from pain. It encapsulates an intensely serene emotional state and, in the Quran, is associated with the emotional bond between content couples, rather than a physical confinement of space.

In conclusion, the exploration of words and their etymology allows us to deeply understand the cultural context and emotional resonance these words carry, thus deepening our understanding of human existence and experience. In "Being and Time," Heidegger introduces "Geoworfenheit," or "throwness," encapsulating the concept of being thrown into existence with all its inherent sufferings, frustrations, and sorrows. Interestingly, Arabic linguistics reflect this concept within the word "Māskan" as it encapsulates Heidegger's "Geoworfenheit," "Bauen," and "Wohnen." Thus, "Māskan" is the peaceful refuge from the external world's suffering or "Geoworfenheit," allowing us to inhabit a space in its original form of emotional tranquility, far removed from the contemporary concept of "building."

Notes
1 Heidegger, Martin, and Hofstadter, Albert. Building Dwelling Thinking. Poetry, Language, Thought, 1971.
2 Heidegger, *Building Dwelling Thinking*, 146.
3 Ibid, 146.
4 El Moussaoui, Mustapha. "*The Phenomenological Significance of Dwelling in Architecture. The Case of Eastern Beka'a Valley - Lebanon.*" n.d. doi:10.4995/THESIS/10251/152487, 2.
5 Heidegger, *Building Dwelling Thinking*, 146.
6 Ibid, 148-149.
7 El Moussaoui, Mustapha. "Rethinking Heideggers Dwelling Through Arabic Linguistics." Journal of Islamic Architecture 6, no. 2 (2020): 127–31. doi:10.18860/JIA.V6I2.8454.
8 The Qur'an. Translated by M.A.S. Abdel Haleem. Oxford UP, 2005, 108.
9 El Moussaoui, *The Phenomenological Significance of Dwelling in Architecture. The Case of Eastern Beka'a Valley – Lebanon*, 58.
10 Bachelard, Gaston. *The Poetics of Space*. Boston, MA: Beacon Press, 1958, 4.

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Biography
Mustapha El Moussaoui an architect and urbanist, currently is an assistant professor at the Free University of Bolzano. He earned his doctorate from Universitat Politecnica de Valencia in 2020. With a solid foundation in architecture and philosophy, Mustapha has been involved in educational courses across Lebanon, China, and Italy. Moreover, he has been engaged professionally in the domain with structures and competitions built and won all over the world. His research primarily focuses on understanding the complex socio-cultural dynamics in urban settings, while examining the existential well-being of city residents. Committed to exploring the future, he also delves into envisioning alternative urban possibilities and uncovering the untapped potentials of cities through mappings.

Panic
Domestic Space as Imaginal Architecture

Mucciolo, Laura
Sapienza University of Rome, Department of Architecture and Design (DiAP), Rome, laura.mucciolo@uniroma1.it

Abstract

Anthony Vidler's thesis at the end of *The Architectural Uncanny. Essays in the Modern Unhomely*, is used as the main investigative hypothesis on the changes brought about by architectural design: "paranoid space is then transformed into panic space, where all limits are blurred into a dense, almost palpable substance that has replaced, almost imperceptibly, traditional architecture" (1994, 225).
The replacement (*transformation*) of the word "paranoiac" with the word "panic" reopens the debate on the meanings of these terms, and how *panic* has taken over by establishing itself as a "spatial condition", defining typologies (or better models) and strategies for inhabiting space. The paper, starting from the etymology, will go through the use of literature and psychology manuals that refer to "panic" and the (goat)-God Pan (Merivale 1969; Hillman 1972; Borgeaud 1979; Barthes 1977), trying to identify an updated definition of "panic" and transposing the updated meaning into the field of architectural design through the identification of "panic space", using domestic space and domesticity as a specific focus.
The domestic space (the house itself) identifies a key model to which a possible theory of "panic space" can be applied precisely because, as Hillman points out, it is in the home that one experiences one's private self: "[...] the relationship with Pan, and therefore with the *imaginal* field we call 'myth' and 'Greece', begins in the relationship that the individual has with the manifestations of Pan within his own private experience" (Hillman, 1972, 19).
By using three different case studies (The Room/La Habitación by Smiljan Radić Clarke, Maison à Bordeaux by OMA and the exhibition pavilion *Casa Palestra* by OMA) the essay aims to investigate the spatial and contextual conditions that are transformed into architecture, with reference to panic, to expand the definition of panic in relation to architectural space.

Key words: panic, Pan, house, domestic space, paranoiac.

1. Pan (Panic)

The last page of *The Architectural Uncanny. Essays in the Modern Unhomely* quietly introduces a word that had been ignored for the entire length of the essay: panic.

"Paranoid space is then transformed into panic space, where all limits are blurred into a dense, almost palpable substance that has replaced, almost imperceptibly, traditional architecture."[1]

Thus, paranoia is a "delirium of interpretation,"[2] of space that gives way to panic, taking hold through this "dense, almost palpable substance" to supplant what was there before.

What is this dense, impalpable substance? What type of space is Vidler referring to?

As connotations of a possible space, the adjectives dense and impalpable are opposite in meaning. Dense describes a space that is crowded together, solid, "lush," "hairy," perceptible to the touch; impalpable describes a space or environment in which the sense of touch becomes useless: it is so thin that it cannot be felt. Technically it seems that Vidler is confusing figures and settings, evoking an territory that is both lush and intangible at the same time. The apparent confusion is clarified upon consulting literature inspired by the word panic. Two characters appear in particular: Pan and his nymphs.[3]

"ETYMOLOGY: 'Panic' relates to the god Pan; but we can play on etymologies as on words (as has always been done) and pretend to believe that 'panic' comes from the Greek adjective that means 'everything.'
F. W.: Conversation."[4]

In this way Roland Barthes, with hidden irony at the end of his *figure* "Catastrophe," introduces the etymological ambiguity of the word "panic," which leads to a precise question: who is Pan?

From the literature and iconography, Pan is a faun, that is he inhabits an incomplete bodily metamorphosis: he is a man with the legs and horns of a goat. The characterization that follows remains secondary to these two fundamental details in collision with each other: the feeling of ground beneath one's feet and the perception of the true height of spaces are two fundamental senses that are corrupted by panic presence. Traveling across territories on his hooves, Pan invades and occupies houses, running from one room to another playing his pipes, but he does so as an "anomalous god." As he storms into and escapes from rooms made for humans, his "goat nature" does not allow him to be invisible.

The literature also tells us he inhabited the "caves obscure"[5] of the imaginary land of Arcadia, and "Pan, living in the cave of Pan under the Acropolis and 'paying the usual tax as a resident alien."[6] His residence, as unstable as his genealogy, changes constantly, making him not so much a "god" as a "guardian" of a collective idea of Nature that certainly includes woodlands, herders, fishers and fauna, *but not only*. Pan, the goat-god, the goat-footed Devil, dies like no Olympian deity has ever done, while living in the "repressed which returns."[7]

As Vidler had intuited for "dense," the demonic Pan is "unwashed, hairy, goatish, fierce, inconstant and noisy,"[8] that is he regulates his body according to his animal state, his instinctual nature, unleashing *panic fear*.

"The goat-god, whose resorts must seem doubly divided from the city (by his supernatural standing, as much as by his spatial distance), could bring there nothing but disorder. Artemidoros in the *Oneirocriticus* insistently makes the point that to dream of Pan dressed as a city dweller appearing in public space means nothing but catastrophe and upheaval, while his appearance in the natural wilderness betokens success and happiness. To some degree, the disorder provoked by Pan (whether it troubles individuals with possession or collectivities with tumultuous panic) is directly the effect of a simple 'displacement.' Pan brings with him into the political universe the properties of the space where he is at home. As a setting for wanderings that are agitated, uncertain, and unstable, this space slips out of proportion. Huntsmen and herdsmen are led about there in response to the movement of animals as much as by their own cunning. This movement, these arcs, which are more or less irrational and uncertainly related to their center, find more explicit expression in the chase, and also in dancing [...]."[9]

To identify a possible panic domesticity, one of the main conditions to be overturned is the outdatedness of Pan understood solely as a woodland god: while James Hillman, in his *Pan and the Nightmare*, might lead to a narrowly defined identification of the "habitats of Pan"[10] (dells, grottos, woods and wilds), the fundamental step is to separate pure geography from the identification of architectures. It would be reductive to assume that because Pan is linked to the imaginary land of Arcadia, he should be sought there, excluding a priori that he might have wandered away. On the contrary, the fundamental passage seems to be:

"Greek myth placed Pan as God of nature. What is meant by that word 'nature' has been analyzed into at least fifty differing notions [...]. To specify Pan's nature, we shall have to see how Pan personifies it, both in his figure and in his landscape, which is at once an inscape, a metaphor and not mere geography."[11]

Fig. 1

Pan's exit from, and temporary and voluntary abandonment of, his original places are recognized as a prolific, subversive force that is consistent with the *displacement* matrix previously introduced by Borgeaud. Given the impossibility of leading Nature, or even Arcadia itself, back to a single, unanimous definition, the identification of Pan's *figures* and *environments* helps to place this god in a broad and more eloquent spectrum, in which he plays his main role, silenced and subordinate with respect to the narrative that has long involved him:

"Pan, god of mountains, of snow, of forests, or, on the other hand, of the rocky coast and even of the sea, rules the frontier of human space. To speak of his landscape is, in effect, to define a limit. To Pan belongs all that the Greeks call the *eschatiai*, the 'edges'."[12]

As custodian of the boundaries, Pan re-hierarchizes the theoretical instructions related to the "subordinate god," declaring the forests, woodlands and dells as just one of the panic possibilities, to which to add rocky cliffs, the seas and oceans, and thus also cities, snow-capped ridges, and spaceships, as well as domestic spaces.

The alterations generated by this complex and ambiguous divinity bring with them spatial and relational conditions such that certain issues of order position themselves at the boundaries of the explored space: for the sake of absurdity, does an architecture of Pan exist? In what architectures can Pan be identified? What is Pan's house like, if it exists?

The sentiment related to the visible or invisible passage of the *goat-god of nature*, Pan, takes the name of *panic*, a condition centered on uncertain physical and mental manifestations caused by unexpected spatial events that conceal a possible but also apparent threat. Panic combines ideomotor responses with the *production of images*: the space offers unexpected conditions that are potentially (but not certainly) dangerous, causing the body to "fall" into a state of immobility or preventing normal movement. Combined with spatial confusion, a veritable "crisis of the imagination" takes place. The resultant overproduction fills the mind with distorted scenarios and images that narrate a new and future space into which we will be immersed.

A transient and innocent, and therefore deceptive, condition, panic generates architectures born of alternative and unusual scenarios that have no continuity with the present once the response has ceased. Indeed, once the effect of *panic fear* is over, probably nothing that was imagined during that time had been real, not even our perception of space. This is why, potentially but not certainly, that which causes panic is dangerous for the safety of the body. The survival of the body in the panic space is often certain, but it is not obvious, and it is invisible to the eyes in that moment: the mind controls the images.

Panic (Fig. 1), therefore, is not a simple and unique condition of the architectural space, though it arises precisely from the presence—in architecture—of "displacements," as Borgeaud would put it. Every type of movement (of objects, people, things or spaces) alters the *status quo*, generating a possible condition of disorder. Above all, architectures are in this hierarchy of order. The movements of the god Pan alter spaces, causing them to lose their proportions: like dancing or chasing, *irrational, agitated, uncertain, unstable* motions mark the passage of the "goat-footed Devil."

A theory of "displacements" is the framework within which the archaic spatial variations of Pan's architectures move: the *dead end* or the *corridor*, *vertigo* or the *labyrinth*, *the stranger in the house* or the *occupied house*, the *oblique plane*, *stacking* or *emptiness*, the *bizarre*, *opacity*, *reverberation*, the *double* or the *mirror*. These archaic spatial structures inhabit the common matrix of "displacements": an action or a space that is subject to a change of reference points and usage undergoes an alteration that revolutionizes the way bodies relate to architectures. A primarily private space in which there is a spatial displacement that triggers irrational motions will generate panic, precisely because of the disturbing nature of the displacement.

2. The Image of "The Stacking" or "The Empty" (I)

The presence of the architectural *figure* of stacking is in no way discordant when it relates to a deposit or warehouse (spaces designed *ad hoc* for accumulation) or an attic or basement (areas of the house that have been adapted to this use by necessity or choice). However, in the private domestic space, accumulation establishes an unexpected and "disorienting" spatial link whereby progress is compromised. The house that foresees and plans for *stacking*, the piling up of objects, and thus the filling of the spaces to the point of impeding access to the house itself, generates panic.

Such is the case of the *Room* in San Miguel, on the island of Chiloé, by Smiljan Radić Clarke. Also known as "Habitación," the house is situated on a hill, thirty meters high, in a clearing left by a logging company in an elm forest. It is longitudinal in layout, measuring five meters by twenty meters. Built on two levels, the house is completely empty on the entrance level except for a piece of furniture that serves as a kitchen and the staircase that leads to the upper floor. The structural system of the building itself, a wooden balloon frame, forms shelving that is used for storing clothing, pillows, cooking pots and other household items. This structure is enclosed by a continuous glazed envelope, separating it from the forest. The upper floor only became part of the volume of the house ten years after it was first built, when the small zinc-clad technical volumes protruding from the roof were enclosed by a large red tent. The construction system, which simultaneously creates both the facades and the only interior finishes, permits the activation of the *stacking* process, as the gaps between the horizontal and vertical elements of the wooden balloon frame are ready to be filled with "whatever will accumulate there, including memories."[13] The *displacement* implemented in this evolutionary house design is clearly explained by Radić's words: "In this way I hope that, with the passage of time, the spaces behind the facades of the house, still isolated, devoid of movement and empty, will fill up with clutter to the point that every last beam of light will be blocked. Over time, the miseries and luxuries thus exposed by the external walls will become the casing of this funeral casket. In this way, the wooden cage will protect the lives of those who take refuge there."[14] The recognition of the domestic space as a void to be filled by accumulation over time identifies the existence of a house that lives in the absence of functional programs and predefined uses. It begins to take on the role of storage, collecting objects of various kinds, first in the cavities within the structure and then on the wood flooring (which in the meantime has doubled its capacity). The architecture allows only the entrance of debris, dust, junk, objects and memories, not their exit, thus accompanying and confirming the process of accumulation (Fig. 2).

The photograph of the house in its fetal stage, without the red tent, is the image of the archaeological memory of this architecture when it was still empty, a mere skeleton of a mammal abandoned in woods.

The house, therefore, by virtue of accommodating the operations of collecting, accumulating, heaping together, piling up, stacking, bundling, jumbling, and overlapping,[15] makes panic a participatory element of the architecture. The entrance of objects will gradually occupy the house, designing it from within by progressively reducing the amount of empty space for living, thereby transforming the habitable space into a storehouse for objects.
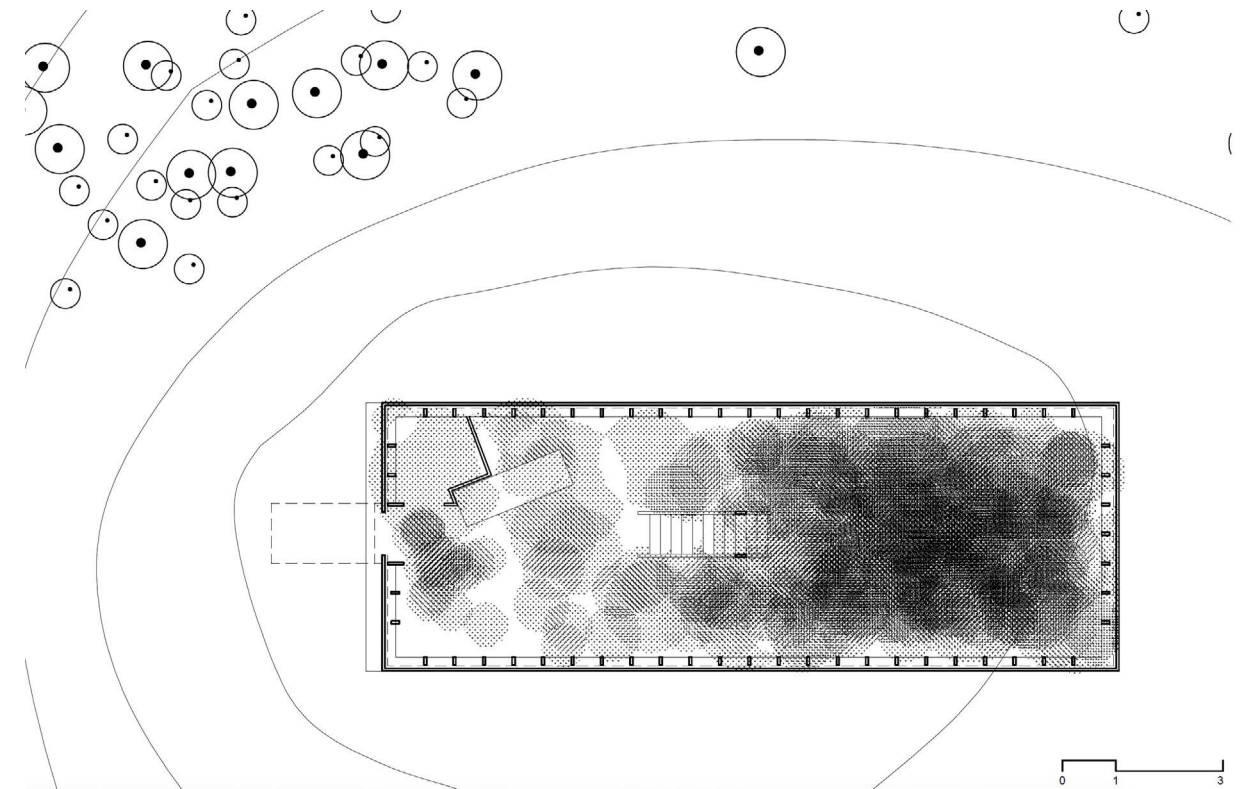
Fig. 2

The evolutionary process of stacking identifies a future time when, overflowing with stuff, both visible and unseen, the now-saturated house will finally fulfill the role of refuge. The body, buried alive by choice within this architecture, is forced to establish new relationships with the space in which it is immersed, where the natural lighting conditions will gradually become compromised, and the ventilation systems will need to be adjusted. Finally, the panic generated by accumulation will force the body to leave the space. What has been called *stacking* in this investigation into panic and the architectures of Pan is identified in psychiatry and psychology as "hoarding disorder." Numerous documentaries, films and TV series (the titles of which associate the word "house" with the word "nightmare") have conducted cultural investigations of this disorder: our "pornographic" curiosity is focused on the inability of the hoarders to manage their space, and on the help they are given in regaining possession of it. It is important to emphasize that the boundary between disorder and choice is both a cultural and historical question, as demonstrated by Radić's words and this example of his architecture.

3. The Image of the "Stranger in the House" or "The Occupied House" (II)

> "Twelve feet square; one hundred and forty-four square feet! Sir, this house would appear to have been built simply for the accommodation of your chimney."
> "Yes, my chimney and me. Tell me candidly now," I added, "would you such a famous chimney abolished?"
> "I wouldn't have it in a house of mine as a gift."[16]

Another of the possible *displacements* (figures or images) concerns the entrance into the house, intentionally or not, of a foreign body. The stranger in the house, in addition to establishing the different nature of their status in relation to the domestic space, also clarifies, through their significantly different mass in terms of materials and size, their own way of occupying the house.

This *figure* or *image* is perfectly illustrated by Herman Melville's story, *I and My Chimney*: The huge chimney occupies the house, sometimes preventing social, spatial and physiological relations between the inhabitants, and indeed hiding some "truths" about the architectural space of the house from the inhabitants themselves.

The entrance of the stranger is like a "surgical" operation in that it may entail piercing, puncturing, perforating or stabbing into the architectural body.

It is not so much the mass that is essential for this figure to exist, but the entrance, that is the relationship between stranger and home. There are other deceptive operations, not related to entry, whereby some architectures bend, move, rotate or rise in response to the presence of strangers: the intersection between parts is the core of the panic image.

One example of this is the Plywood House in Basel (1984) by Herzog & de Meuron. The short arm, at a right angle to the hallway along the bedrooms, bends inward on one side in reaction to the presence of a paulownia tree, generating an obtuse angle. In this case, the architecture changes its shape in response to an outsider, bending into a different volumetric configuration, but the two realms remain distinct, with the building closing in on itself and the tree remaining external to the architectural space. No panic figure is triggered.

Maison à Bordeaux, the house designed for Jean-François and Hélène Lemoine in Floirac, is on three floors with a partially underground level. Two volumes face onto a patio, one of which hosts private guest rooms and the caretaker's quarters, while the other, three floors high, called the "floating bunker,"[17] is where the Lemoine family lived. This bunker-nucleus accommodates various different spaces that were not assigned strictly defined functions, thereby confirming the instability of the design program. Among these spaces, the presence of the "uncovered" cave-staircase clearly identifies a space of the panic "underworld." Nonetheless and with more character, the element that establishes *displacement* in the house is a room on an elevator platform that moves between the three floors. The insertion into the house of a "wheelhouse" like those on Dutch canal boats, which in fact introduce vertical movement by behaving like elevator-rooms, was proposed as a mobility solution for Jean-François Lemoine, who has been confined to a wheelchair following a car accident.

Home elevators are well-known, but what takes place at Floirac is different: the wheelhouse is a room that functions as an elevator, thereby interacting with the house: they "pierce" one another.

The *displacement* that allows a wheelhouse to enter the house is the entrance of a stranger into the body of the house, which in turn accepts this dystopian presence that brings with it new spatial hierarchies. The variations in spatial composition change the perception of the domestic space: the violation of boundaries, the expansion, the sounds brought by this work of nautical engineering at the service of the house all contribute to the creation of panic conditions (Fig. 3).

Unlike a normal elevator car, the walls of which suspend the unveiling of the process of ascent or descent, allowing both imagination (on the way) and the revelation of the space (upon arrival), this wheelhouse, approximately the size of le Corbusier's *Cabanon*, has no material boundaries.
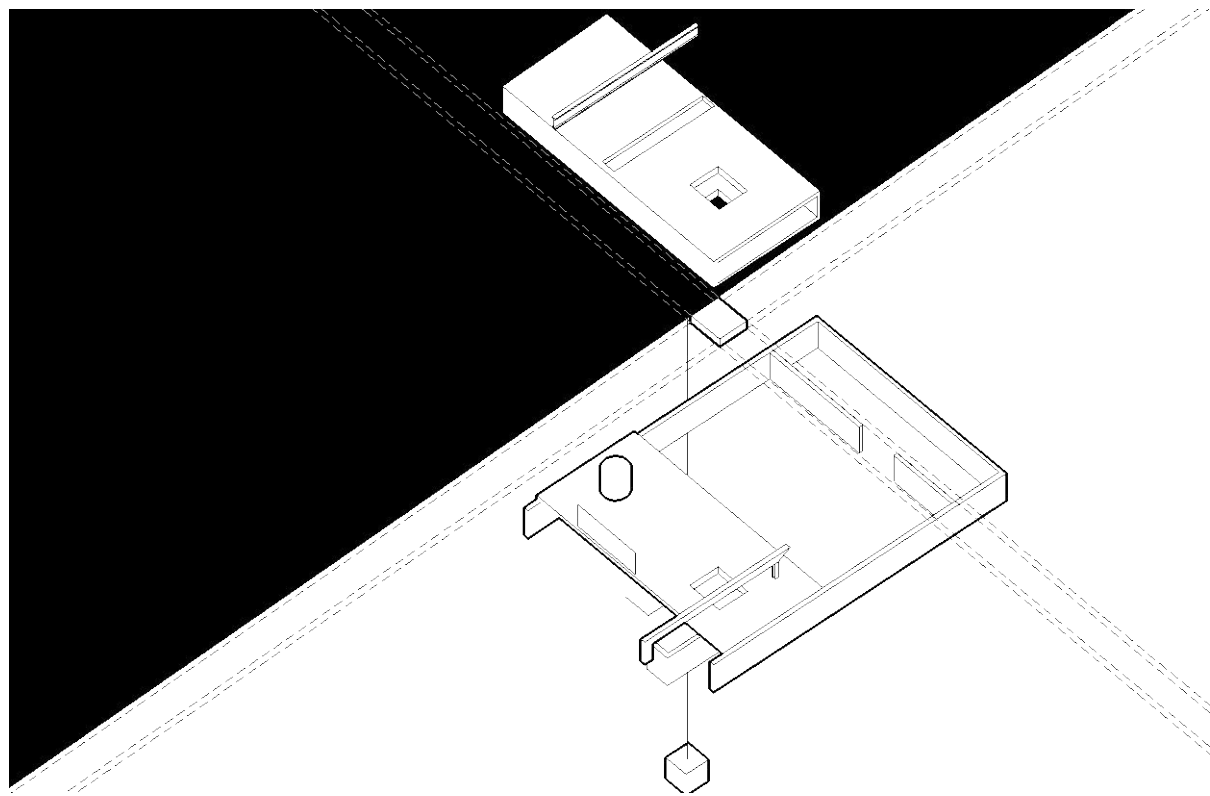

Fig. 3

The wheelhouse is completely open on the basement level and open on three sides on the upper levels, although with fixed boundaries. It occupies the house "totally," revealing structural and nonstructural superimpositions as truncated floors and layered levels that follow one after the other in the same visual "scene," with sounds and noises (hence uses) from different areas of the house blending into layers as they are crossed through vertically. The wheelhouse establishes the boundaries of each floor while anticipating the vertical arrival (from above or below) of someone into the house—unlike normal access, which is always horizontal.

The wheelhouse is a *Cabanon* in the sense that in addition to sharing similar dimensions, it is a living space, occupied over time by desks, a sofa bed, books, a vacuum cleaner, etc.

It is configured, that is, as an unstructured space for variable use that adds to the instability of the functional "program" at each level, even at the cost of throwing it into crisis.

The stranger in this case becomes a strategic modality in which the body passing through the house coincides with it, merging with the structure of the house itself. Observed from within its structural cavities (vadding[18]), the house seems to be viewed from the outside of an interior.

The way in which the stranger (the wheelhouse) occupies the house defines an observational paradox in which the body, blending coincidentally with the stranger, causes the domestic space to become the primary subject of panic estrangement.

4. The Image of "Labyrinth" or "Vertigo" (III)

Reflections on the domestic space have identified in Casa Palestra a controversial and essential case for initiating considerations that would include Pan and altered domesticities in this research. This led to the discovery of a *figure* o *image* that can be indicated as the "The Labyrinth" or "Vertigo." As an imaginal figure, the labyrinth represents spatial conditions found in Cortazar's Argentine literature: with respect to the image of the labyrinth, which might be buried in shared consciousness, the architecture of the labyrinth has no underground or roofs, no walls or spaces for surrender. Instead, it is based on the strategy of repetition. Corners, compositions, elements create the labyrinth, repeating themselves into an obsessive mechanism that composes the space.

The labyrinth as generator of "nausea, vertigo, malaise"[19] is the intersection between the figure and the panic image.

With respect to the case studies investigated in the research, that is works of architecture from 1986 onwards, Casa Palestra is a notable exception: a now-dismantled pavilion whose design was the result of the manipulation of a prototype. Mies van der Rohe's Barcelona Pavilion, which nearly ended up as a filling and service station,[20] was adopted, copied, curved, and transposed in 1986 by OMA—Office for Metropolitan Architecture—to become a project for the XVII Milan Triennale, entitled *The Domestic Project. Archetypes and Prototypes*.[21] This manipulation process crushed and bent the proportions, accelerating the inner facades and amplifying the space around the outer wall. While the original was based on geometrical constants, the spatial hierarchy was altered so that it was now built around experiential conditions. The architecture found itself occupied by a diverse series of repetitive events—both fixed (mirrors, exercise equipment, school lockers, loudspeakers, reflection panels) and mobile (lasers, spotlights, vapor, smell, projections)—articulating the narration of the space (Fig. 4).
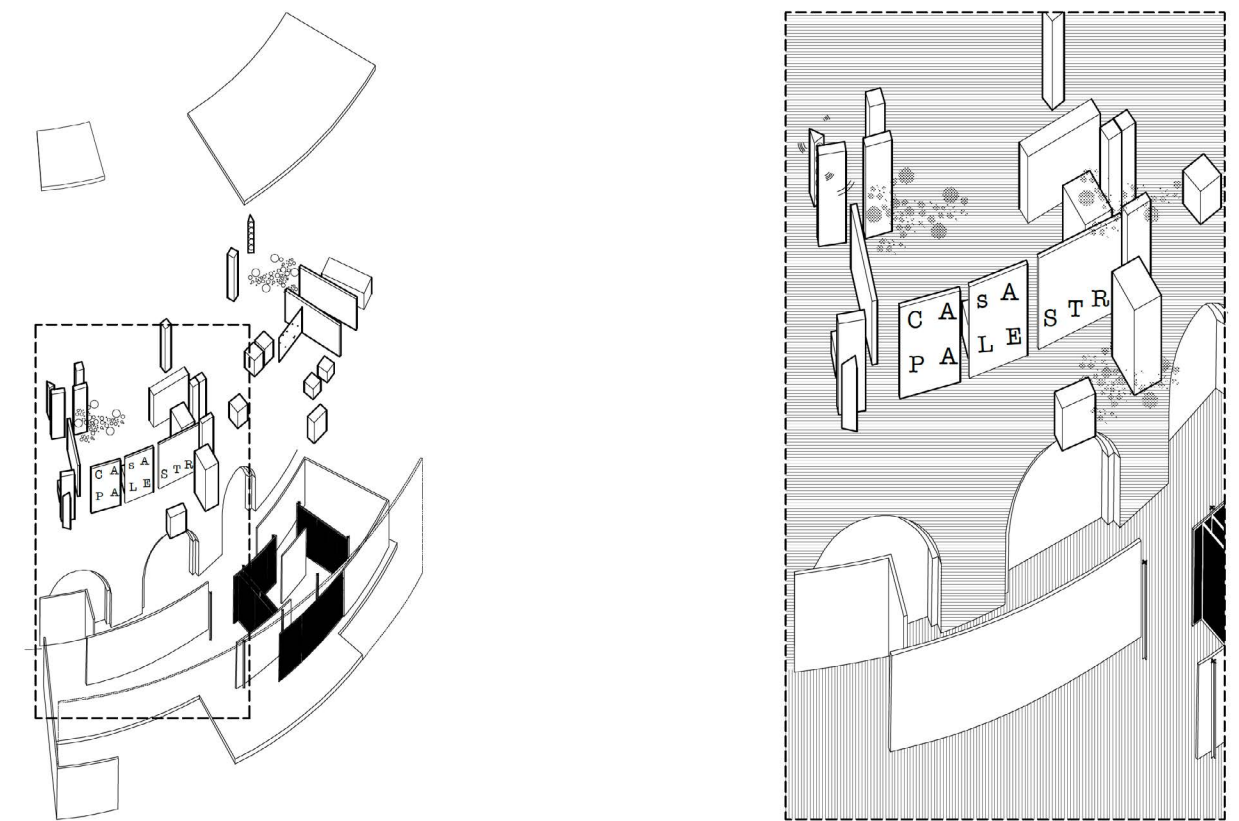

Fig. 4

It was not by chance that section drawings were not used to communicate the architecture of the gymnasium-house. Rather, it confirms the house's labyrinthine nature, for at least two reasons. The first reason of a practical nature was the difficulty of expressing the postmodern (dis)proportions of a distorted object by means of views that would reveal its disjointed grammar. The second reason, stemming from both the first and from theoretical reasons, was a confirmation of how this temporary architecture made use of the sign of the labyrinth, that is the repetition of "obstacles" that forced interactions of the senses, altering spatial perception and indeed generating bodily "malaise." The obstacles were variable (vapor), they limited progress (lasers), they multiplied the space by canceling the reliability of measure (mirrors), they offended the sense of smell (sweat), they hindered concentration (loudspeakers), they impeded sight (neons, spotlights, etc.). Odors, vapors, breath, air, and beams of light would vary according to the inhabitants and uses, accentuating the relationship between space and bodily vertigo. No reference was made to the home as a hierarchical structure in which to insert "functions," necessarily disconnected and separated by thin or thick partitions in a re-elaboration of the "the myth of the precise program, according to which the only good architecture is that which arises from clearly expressed needs and precisely formulated requirements."[22]
The statement of intent that accompanied the project read:

"In the recent attacks, modern architecture is always presented as lifeless, puritanical, empty and uninhabited. It has always been our intuition however, that modern architecture is in itself a hedonistic movement, that its severity, abstraction and rigor are in fact plots to create the most provocative settings for the experiment that is modern life. [...] The house will be both desecrated and inaugurated and show its perfect appropriateness for even the most suggestive aspects of contemporary culture. Actions suggested by projection and light effects and an abstract soundtrack of the human voice—somewhere in the ambiguous zone between exercise and sexual pleasure—will complete this spectacle, whose aim is to shock people into an awareness of the possible 'hidden' dimensions of modern architecture."[23]

Through its construction of a labyrinth, Casa Palestra identified the precise design strategy for investigating the relationship between body and space by means of exploratory and provocative modalities. Albeit shrouded by a postmodern "allure," the experiment narrated and anticipated a psychedelic domestic space surrounded by sounds, noises, lights, mirrors, neons, and loudspeakers, a space in which the absence of walls and ceilings determined a change in the boundaries of the house. Without doors through which to exit, the body could not leave and was doomed to repeat gymnastic activities as the only expedient for venting the impulses that life outside of the house had forced it to accumulate. The house as a bodily extension had become Pan's space at the service of humans living immersed in the Age of Panic.

5. Epilogue
Panic, or rather *panic fear*, is in essence presented as a psychological metaphor useful for identifying *spatial figures* that can aid in investigating the existence and thus the composition of *design strategies* in space. The cases presented here investigate a reduced spectrum of figures, identifying the characterization of their images, the way in which each image operates and, consequently, through specific case studies, a spatial reading of the composition of the identified architectural project.
The *images* or *figures* are all united by a possible theory, suggested by the words of Borgeaud and identified as "displacement theory," aimed at identifying the introduction to the domestic space of a change of program, of use, of needs, that throws the rhythm of domestic activities into array, thereby allowing panic tension to sneak into the architecture, as demonstrated by the gymnasium in Casa Palestra (the labyrinth) or the storage in Radić's Room (stacking) or in Bordeaux (the stranger).
Among the objectives of the research[24]—beyond a strict demonstration of the thesis or the architectural confirmation of the path that began with Vidler—is a desire to legitimize panic and nightmares as feelings and modalities of spatial experience. Despite their being unstructured, subordinate, amplified, and elusive to the architectural control of the space, they are no less worthy of attention than emblazoned spatial displays. If it is true that the creation of images or figures falsifies the perspective of the space we inhabit, then panic is a very strong accelerator of this perspective. Generated by the mind, which constantly produces *images*, that is *displacements*, panic insinuates itself in ambiguous times of confusion and despair such as those in we live and in which we will continue to live, and thus it will continuously alter the domestic (and non-domestic) architectures that we will inhabit. In the 1999 exhibition catalog for "The Un-Private House" curated by Terence Riley, Philip Johnson reported that "it is my opinion that the most interesting exhibit is still that of the private house, and I wish to have as many private houses as I can."
The private house, though apparently untouched by panic, became experimental territory: "Johnson also understood that the private house as a building type served as an experimental laboratory for architecture, particularly among his contemporaries."[25]

In the Age of Panic, tangentially traversing literature or psychology and then returning to architecture of the house as an *experimental laboratory* "allows us to restore to space the *imaginal* power to move and construct as many escape routes and strategies as possible. In this way, through a "return to Greece," repressed instincts, regressions, retreats, and silent unconsciouses can be permitted to emerge, thereby allowing "the imagination to become [again] archetypal."[26]

Notes
1. Anthony Vidler, *The Architectural Uncanny. Essays in the Modern Unhomely* (Cambridge: The Mit Press, 1992), 225.
2. "PARANOIA. In fact, paranoia is a *delirium of interpretation*. Each fact, event, force, observation is caught in one system of speculation and "understood" by the afflicted individual in such a way that it absolutely confirms and reinforces his thesis – that is, the initial delusion which is his point of departure. *The paranoiac always hits the nail on the head, no matter where the hammer blows fall*". OMA, Rem Koolhaas, Bruce Mau, *S,M,L,XL* (Rotterdam: 010 Publishers, 1995), 990.
3. "The story of the ambiguous relationship between men and nymphs is the story of the difficult relationship between man and his images." Giorgio Agamben, *Ninfe*, (Turin: Bollati Boringhieri, 2007), 45.
4. Roland Barthes, *Frammenti di un discorso amoroso*, (Turin: Einaudi, [1977] 2014), 45.
5. James Hillman, *Saggio su Pan*, (Milan: Adelphi, [1972] 1977), 50.
6. Patricia Merivale, *Pan the Goat-God, His Myth in Modern Times*, (Harvard: Harvard University Press, 1969), 4-5.
7. James Hillman, *Saggio su Pan*, (Milan: Adelphi, [1972] 1977), 59.
8. "Incerti ad Panem", *Poetae Latini Minores*, XXIX, (Leipzig: ed. Emil Baehrens, 1881), no. III: 170.
9. Philippe Borgeaud, *The Cult of Pan in the Ancient Greece*, (Chicago: The University of Chicago Press, [1979] 1988), 61.
10. James Hillman, *Saggio su Pan*, (Milan: Adelphi, [1972] 1977), 50.
11. Ibid., 49-50.
12. Philippe Borgeaud, *The Cult of Pan in the Ancient Greece*, (Chicago: The University of Chicago Press, [1979] 1988), 60.
13. Smiljan C. Radić, "Una casa molto isolata, dove la vita si decanta". Casabella. no. 668, 1999: 46.
14. Ibid.
15. "However there are other piles, of inedible materials. Piles of stones are erected, no matter how strenuous; then they will fall apart again. Those piles stand for a long time, for a kind of eternity. […] They bear witness to the rhythmic efforts of many, of whom nothing remains but these indestructible monuments" Elias Canetti, *Massa e potere*, (Milan: Adelphi, [1960] 1981), 106-7.
16. Herman Melville, "I and my Chimney", en: *Billy Budd and Other Prose Pieces*. London: Constable and Company LTD, [1856] 1924, ed. 2017, 17.
17. Beatrice Lampariello, *Villa a Floirac. Rem Koolhaas/Oma 1994-98*, (Rome: Aracne, 2011), 48.
18. "VADDING. The word is vadding. It's verb and it means the physical invasion of building space, usually the space above the ceiling tiles. You can remove these tiles and crawl around through the wiring on the floor – vadding. Hackers occasionally invade buildings and engage in vadding. They get a ladder, go up there, and crawl around all night. They're mapping the telephone lines and the computer lines in the building. I find it quite heartening that vadding even exists and that there are people willing to do it.", OMA, Rem Koolhaas, Bruce Mau, *S,M,L,XL* (Rotterdam: 010 Publishers, 1995), 1272.
19. "Labyrinths always have a slight movement that prepares nausea, vertigo, malaise for the labyrinthine dreamer", Gaston, Bachelard, *La terra e il riposo. Un viaggio tra le immagini dell'intimità (*Milan: Il Castello. 1ˢᵗ ed. –. *La Terre et les Rêves du repos. Essai sur les images de l'intimité*. Paris: Corti, 1948), 179.
20. OMA, Rem Koolhaas, Bruce Mau, *S,M,L,XL* (Rotterdam: 010 Publishers, 1995), 49-63.
21. Teyssot, Georges (ed. by). *Il progetto domestico. La casa dell'uomo: archetipi e prototipi (Saggi e Progetti)*, (Milan: Electa+Triennale di Milano, 1986).
22. Lucius Burckhardt, 1980, "Der Schmutz". *Werk und Zeit*, no. 3, s.p.; also in Lucius Burckhardt, "Lo sporco" en: Lucius Burkhardt, *Il falso è l'autentico. Politica, paesaggio, design, architettura*, *pianificazione, pedagogia* (Macerata: Quodlibet, 2019), 179.
23. An excerpt was partially published in "Domus," n. 671, XVII Triennale: Il progetto domestico, 1986, pp. XX-XX. The complete excerpt has been requested by OMA, and it is partially published on the site (www.oma.com) and in the previously cited book *S,M,L,XL*.
24. This article contains a small part of the results of ongoing doctoral research (2021-2024).
25. Lowry, Gleen. "Foreword" en: Riley, Terence. *The Un-Private House* (New York: MoMA, 1999), 6.
26. James Hillman, *Saggio su Pan*, (Milan: Adelphi, [1972] 1977), 17.

Image Captions
Fig. 1. Cy Twombly, *Pan (Panic)*, 1975, drawing, Collection Lambert, Avignon.
Fig. 2. The Image of "The Stacking" or "The Empty": The Room (La Habitación) by Smiljan Radić Clarke as an active storehouse; © drawing by the author, 2023.
Fig. 3. The Image of the "Stranger in the House" or "The Occupied House": Maison à Bordeaux by OMA observed from the axonometric point of view to tell the outsider's point of view (the cockpit); © drawing by the author, 2023.
Fig. 4. The Image of "Labyrinth" or "Vertigo": Casa Palestra by OMA (1986) in n axonometric exploded view to highlight the altered and dizzying state of spatial succession; © drawing by the author, 2023.

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Biography
Laura Mucciolo, architect, is currently Ph.D. student in *Architecture. Theories and Project* (Sapienza University of Rome), developing research on the relationship between panic and domestic architecture (supervisor L. Molinari, co-supervisor C. Padoa Schioppa). In 2022, she took part in the *Hypercomfort Summer School*, curated by S. Bru (BRUTHER), E. Jürgens, H.-W. Müller, promoted by the UdK Berlin, with the ephemeral project *With Mies van der Rohe into a New World* (Neue Nationalgalerie). In the same year, she took part in *The Energy Show Exhibition* at HNI (Rotterdam) and guest curator (with M. Pivetta e G. Razzolini) of the italian-touring exhibition *Isolario Venezia Sylva* (by S. Marini), Dept. of Architecture (Florence).
Her most recent book is *Terzo paradiso* (Libria, 2022). She took part to conferences and published essays focused on city, countryside, urban and non-urban borders fields, figurative communication of architecture, domestic space.

Composting Death
Towards a Body Sublimation

Padoa Schioppa, Caterina
Sapienza University of Rome, Department of Architecture and Design, Rome, Italy

Abstract

30 square meters of soil fertilizer: is that our very final destination?
Compost – from the Latin *com-positus,* "to place together" – or decayed organic material, commonly prepared by decomposing plant, food waste, recycling organic materials and manure used as a fertilizer for growing plants – has a weird, both etymological and semiotic, resonance with an inclusive idea of home, which goes far beyond the domestication of Nature. As a metaphor, compost has recently become a broad concept encompassing a revised relationship between humankind and the environment, aiming at overcoming the modern dualistic approach in favor of a hybrid and "ecologized thought".
According to Donna Haraway, "living is composting". Biologically, this means that a multi-species living is a dynamic mess of diverse bodies. Cognitively, the notion of compost enhances the "making oddkin" extending familial ties beyond blood relations, ultimately making communities out of compost.
Beside this metaphorical representation, compost is acquiring another odd meaning. As an environment-friendly alternative to burial or cremation, both carrying pretty high environmental costs, especially in dense urban areas, human bodies can be turned into soil after death, similarly to what happened to our ancestors, and their livestock, for tens of thousands of years. This practice, which places a corpse directly into a natural burial ground or in a reusable "vessel" made of biodegradable materials that foster its transformation into nutrient-dense soil in about a month, is the epitome of the circular economy, and the end of the very idea of humans as supernatural beings. The predicted carnage that will affect a large number of human beings in the near future – the chronological end of the boomers generation – poses the question in terms of a paradoxical nemesis. The generation that is most responsible for intensifying man's negative impact on natural resources could literally repay the damage with the "sacrifice" of its members' own bodies.
Yet, beyond the ecological foundation of the natural organic reduction of human remains, not universally supported by the scientific community, such "green death" questions the whole approach to death in Western cultures. After all, the time has come to invent not only a new way of living in the "damaged earth", but perhaps, and primarily, a new way of dying.
In this regard, "terramation" implies a rethinking of the very notion of memory and thus of architecture as construction of memory devices.
This broad concept of compost will lead to a reflection on the consequences that secularization, as well as the presumed and possible desecularization of culture, has on ritual practices and farewell spaces.

Key words: compost, communities, death, rituals, farewell spaces.

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1. Snapshot of Italian contemporary mourning

What can be the advantage of living in a country that, with extreme delay compared to other Western countries, responds to the pressures of a plural society, increasingly challenging policies and actions for inclusion and protection of civil rights, which also concern death?
The Italian case is paradigmatic of a radical change, occurred over just a few decades, in demographic composition, social structure and, as a consequence, cultural orientations. The country is ageing – with the generation of boomers having reached the third age – and a collapse of spaces for the dying and the dead, especially in large metropolitan areas, is a realistic prediction. At the same time, the increasing presence of migrants, non-Catholic and so-called "non-belonging" communities[1], even beyond the large semantic umbrella of LGBTQIA2S+, unfolds the growing demand for non-discriminatory spaces for unconventional ritual practices.
These changes, as I will try to explain, affect not only the living but also the dying and the dead, long exiled by modernity to states of exception and locked into invisible spaces[2]. Hospitals, nursing homes, residences for dementia patients, hospices, and of course cemeteries have consolidated their separated, introverted nature through both their urban location, often at the outskirts of cities, and their morphological and typological conformation. The "great confinement" of the diverse – the poor, the sick, the orphans, the elderly – initiated during the Renaissance and reinforced in the Enlightenment was enabled by the invention of actual *cities in miniature*, ideally self-sufficient, comparable to monasteries in terms of form and structure. Seemingly safer, these places are indeed death outposts, transition spaces for scrapping, where the process of physical and psychic deterioration is accelerated by isolation[3].
In sometimes subtler forms, confinement is still today the solution for dealing with the "crisis of death"[4] in Western cultures. Among the many side-effects of the recent pandemic, vulnerability to dealing with death, in a both physical and psychic sense, both as a community and as individuals, has generated a new interest[5]. Nonetheless, the interest towards death is paradoxical, since humans have never ceased to be fatally entangled. New questions concerning the categories of thought and political, social and architectural design tend to create a connection between the environmental and climate emergency and the discourse on practices and spaces for death in the future. In particular, I am referring to those practices that consciously address the mortality of life "without lies"[6] through forms of "domestication" of death that allow taboos to be broken – e.g. euthanasia; or to those practices that unscrupulously point to ecological, for some macabre, alternatives for the treatment of corpses; and finally to anti-rhetorical practices on human remains, capable of challenging the very idea of burial and memory, by approaching even death in terms of an "ecological footprint".
Actually, the philosophical speculations raised by post-humanism, questioning the dominion of *humanitas* over *animalitas*[7] – the two inescapable conditions embodied by humankind – encompass the idea that Homo can sacrifice the desire of immortality and eternity[8], materially symbolized by the tomb[9], as the extreme awareness of his own *animalitas*. This perspective broadly merges the ecological, existential and architectural finalities. However, very crucial questions for the architectural disciplines are raised, given that burial – as a device of remembrance – has been truly the primary purpose of architecture, since archaic humanity, as Adolf Loos points out in his unmatched definition of Architecture. "If we find in the forest a mound, six feet long and three feet wide, raised by a shovel to form a pyramid, we turn serious and something in us says: here someone lies buried. That is Architecture".[10]
To answer the question raised at the beginning, in this paper I will try to underpin the idea that the delayed reaction to the environmental and climate emergency in many Western countries is often justified under the narrative that people, whose conservative attitudes, habits and beliefs are difficult to erase, stand in the way of the revolutions that are needed today, while in fact the opposite is true. The space of death is the litmus test that shows a much more dynamic version of societies. It is a space of syncretism, a space of dialogue between archaic and contemporary conceptions, a metaphysical space of overlap between East and West[11]. In it, magical thinking – which has resisted all attempts at extirpation by positivist culture – and secular spirit, which embraces an "open" idea of humanity, have always converged, and not in contradiction with each other. In this manner, the "laic" in its etymological root – from the Greek *laos*, people – is distinguished not from the sacred but from the exclusive, from the forbidden, the archetype of which is the Greek temple. The laic thus designates the unbidden, the unbanned, and by extension, the inclusive space.
Cemeteries can be considered architectural samples of cultural contamination and tolerance, early experiments of ethnic and religious coexistence, metaphors of a "universal common space"[12] between the common sense of familiarity and estrangement. In this regard, the first Islamic minaret in Italy is that of the French Military Cemetery in Venafro, where about 6,000 soldiers – two thirds of whom from the Maghreb region – who fell in the battle of Cassino in 1944 are buried. The cemetery is conceived as a large field, whose formal evenness alludes to the non-hierarchical space of the democratic city, where all human beings enjoy equal treatment, and with equal dignity deserve to be celebrated and remembered for their sacrifice.

In line with this reading, beyond the specific architectural structure, the cemetery would be the archetype of inclusiveness but not, as is commonly thought, because of the denial of the symbolic, but on the contrary because of its exceptional redundancy, a redundancy that is rather qualitative than quantitative. That "absolute" symbolic landscape is truly home to all.

Like all built environments, the cemetery dialectically combines the rational obstinacy of the project and the corruptive action of functional mutations, semantic contaminations, even the metabolic and corrosive forces of nature. This action, which is always generative, even when anarchic, is capable of violating the material integrity of architecture and transforming it into a "dying object"[13], into a corpse, thereby amplifying its symbolic dimension. From convivial spaces, as well as eccentric, occasionally romantic and always free sanctuaries for wandering and healing the soul, in many cities cemeteries have become actual ecological storages, multi-species reservoirs[14]. Built as a hygienic device to protect the city of the living[15], the fence that surrounds the cemetery has turned into its paradoxical, subversive counterbalance, soliciting the colonization of the wild. In this sense, the cemetery embodies that idea of the laic as an open, neutral, non-discriminated and non-specific space, akin to the concept of "queerness" developed in gender studies and extended to all fields of knowledge as a category that generically challenges the boundaries of normativity beyond the identity, literally "determining the indetermination"[16]

This shift of framework leads us to argue that the spaces for death provide a great opportunity to formulate strategies for living in a "damaged earth", to use Donna Haraway's eloquence[17].

2. From hybrid to scattered spaces

Changes in space are indeed a crucial hint to understand how the relationship with death has changed in Western cultures over the last centuries[18]. In early Christian societies, the lack of boundaries between life and death was emblematically represented by the simultaneous celebration of all rites of passage – the radical changes of ontological regime or social status, such as birth, marriage, death – in the same place: the church. Alongside the corpses placed in the spaces adjacent to or below the church for desiccation, religious and civil ceremonies took place, as well as the most ordinary functions of community life, such as Sunday walks, commercial exchanges and clandestine love encounters. The spatial and psychological promiscuity between life and death in the church embodies what the French philosopher Jean Baudrillard has described in terms of "dominicality of death"[19], the human ability to perform daily, secular, even recreational duties within the space for death (Fig. 1).

Fig. 1

After all, the Christian civilization derives from earlier Mediterranean religions embedded in the myth of the dead and in the chthonic deity (the Egyptian Osiris and the Greek Persephone/Kore), as well as in the katabasis (the descent into the underworld) and in the nekya (the necromantic practice of communication with the afterlife). For a long time, right up to the dawn of modernity, Western culture

considered the underworld Hades as a "vital" place, as a tipping realm from which mankind draws nourishment on an imaginative rather than material level, a passage one may access in order to reach an otherworldly dimension of knowledge[20].

Such necrophiliac mindset in the ancient world explains why the classic architectural and iconographic form of the threshold separating the living from the dead, Good from Evil takes the shape of an either anthropomorphic or zoomorphic gate, wide open to the underworld, taking on the appearance of a hellish mouth in many cultures, with the double meaning of evoking and exorcising the devil[21].

With the Edict of Saint-Cloud in 1804, the door closes, the unity of space is broken, and the physical and temporal continuity between the space of ritual, the space for the treatment of the corpse, and the space for human remains – traditionally reserved for remembrance – is interrupted. The modern condition conveys a death "scattered" in a multiplicity of places that cannot symbolically compete with the solemn architectures of the past, and above all in places where the body, either the body of the mourners in ritual actions, or the body of the dead around which the cycle of mourning is performed, is no longer the main protagonist. Bodies are disciplined, and the funeral lament, namely a soliciting "technique of weeping"[22] that has given a formal horizon to suffering and, together with the building of the tomb, is the foundation of anthropogenesis, is prohibited. According to the ethnographic research conducted by Ernesto De Martino in the Southern Italian region of Lucania in the 1950s, the funeral lament has the function of transforming the excess, the disorder of the "mourning crisis" (the symptoms of which are rage, hunger, lust) into order, and ritual action. The mimicry and gestures of professional mourners have a tragic and spectacular character that is essentially unchanged since the archaic to the Christian period, and on to modernity. Against the modern project of universalism, indeed, such "folkloric relics"[23], traditions and age-old superstitions have survived on islands and remote inland areas.

The decline of the body's central position has been further accelerated by the rise of cremation rates in recent decades, even in countries like Italy, traditionally reluctant to such practice due to a firm Christian culture that – similarly to other Abrahamic religions – forbids the cinerary rite, much practised in antiquity, as the most terrific and sacred form of burial in the name of the "corporal mercy"[24]. The first cremation in the modern age – performed through a gas-powered equipment, designed and tested for the first time in Italy by scientists Giovanni Polli and Celeste Clericetti[25] – had a very significant political and cultural impact. Affirming the right to choose the destiny of the mortal remains was indeed considered a heretical act, against the laws that in Italy, as in most European countries, adhered to religious dogmas until the second half of the 19th century.
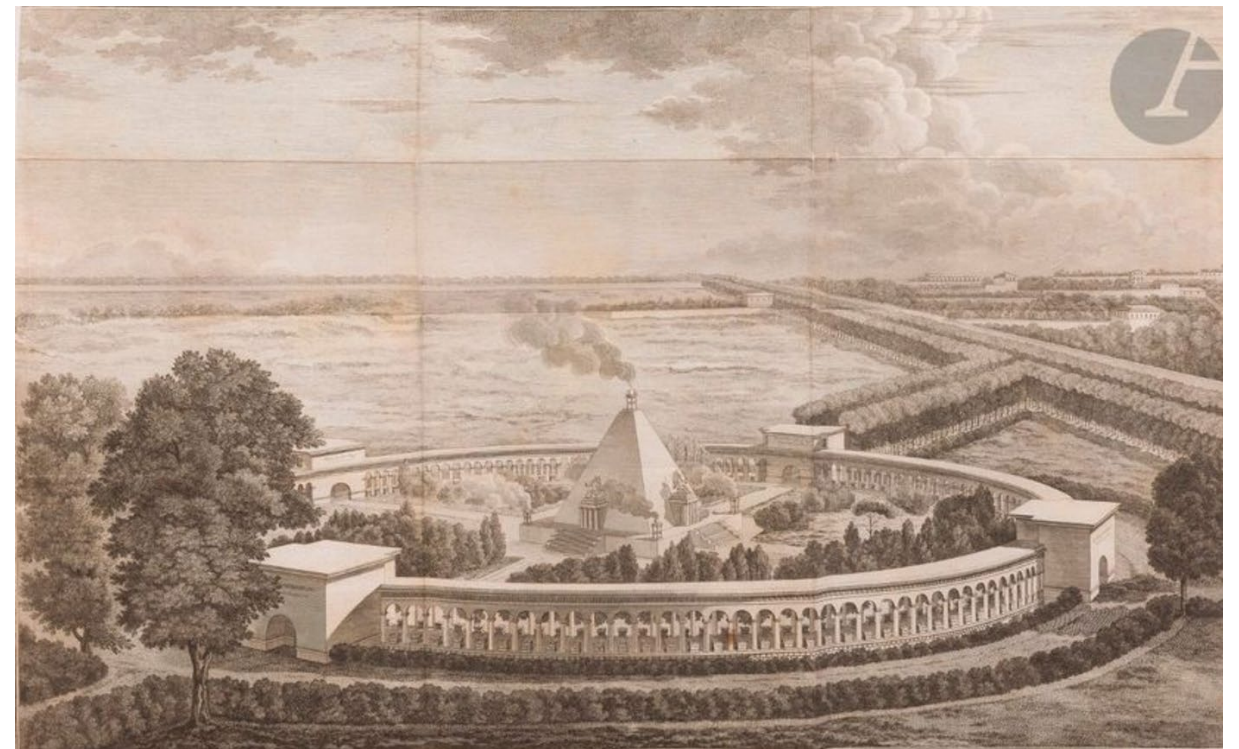
Fig. 2

At present, the planet seems to be clearly divided into two hemispheres, with the discriminating factor being the demographic distribution of secularity. Cremation is extensively adopted in the Far East – with an over 90% rate in Japan, Taiwan, India – and increasingly in North America and Europe – especially in Scandinavian countries and the United Kingdom – while it is almost absent in the African continent and in the Near East[26]. However, other factors also play a role in this new geography of cremations.

Cremation is cheaper and presumably more ecological than traditional burial. The concentration of the population in metropolitan areas, with little or no space for burial, the secularization of cultures and the spread of alternative forms of spirituality, based on the common "care for the earth"[27] have spurred a political demand and planning thinking on alternative funeral rites. Where the demand for cremation is growing rapidly, the space for cremation ceremonies should be entirely rethought. Italian crematoria, for example, are more akin to corpse processing factories, which fulfil the technical function but provide no farewell space. Coffins are often left in storage for weeks while the gap expands between the time of the funeral and the time when the body returns to the earth – either under a tombstone, or in a cell wall or scattered in nature. After all, the crematorium is still an architectural form to be explored in terms of design[28].

Since its first typological enunciation during the Enlightenment, much like the other social and productive infrastructures for the modern society, the burial incineration building was factory-like, despite its monumental representativeness. The very first project designed by Pierre Marine Giraud in 1794[29] is the emblem of this complex logistics, where technical functions – the cremation furnaces – overlap with theatrical, highly symbolic functions – the ceremonial spaces for the last farewell (Fig. 2). With its outstanding central chimney, as in the mythical fireplace of the Greek-Roman city, the Crematorium is configured as a real *limes*, a material and existential interface between the loud city of the living and the silent city of the dead. In 1940, Gunnar Asplund pioneered a quite different conception with his design for the Woodland Crematorium in Stockholm, an organic architecture, literally sunken into and intertwined with nature, where the funeral ritual is fully accomplished, up to the delivery and scattering of ashes in the stunning surroundings.

Despite such historical examples, crematoria are still rarely considered sacred architecture, or spatial devices holding the mourning ritual, the choreography of which is performed across thresholds, diaphragms and intermediate spaces, emphasizing the "metaphysical atmosphere" this universal anthropological experience requires. In countries that actively invest in the construction of new crematoria – such as Belgium, Germany, The Netherlands and the Scandinavian countries – the tendency is increasingly to conceive the farewell spaces for the collective rituals, as well as the waiting rooms, as places to stay, as domestic landscapes where time is spent processing the transformation of the deceased into dust. Large windows open onto fragments of nature, mineral gardens, or even water bodies – ultimately on the "terrestrial world" – metaphorically seem to remind mourners of the sense of human predestination: "*pulvis es, et in pulverem reverteris*"[30].

Fig. 3

Thinking of the crematorium as a hybrid architectural genre, at the same time an increasingly technologically sophisticated combustion plant, and a theatre of the ritual cycle, is a possible but not the only strategy. New options are on the table. In overpopulated countries, such as India, "open air cremations" – notably resulting in a poorer bone fragmentation – are widely employed, even as large,

collective funeral pyres during the recent pandemic. According to some scientists, outdoor pyres, burning human corpses without coffin, supported by a higher technical accuracy, are potentially more sustainable than any traditional indoor cremation involving the emission of dioxins, benzopyrene and other harmful chemicals and therefore further air pollutants[31] (Fig. 3).

Conversely, in Japan, visionary, sometimes suggestive and perhaps necessary hypotheses for dense metropolitan areas are being envisioned. In a design competition for a vertical cemetery in Tokyo held in 2016, the winning project proposed a tower-station from which the human remains are dispersed into the sky inside red balloons forming a non-stop artificial swarm, a rain of indeterminate ashes.

In both these scenarios, the physical and psychological distance of burial – understood as a gesture that "puts a body into oblivion" – from the space of ritual, as well as the "anonymity" of burial define a perspective of death that is not necessarily more cynical but certainly wilder, literally messier. Yet, such perspective, implying a radical shift on body disposal and the final destination of human remains, is indeed cross-cutting and therefore hard to embrace. Except for a few exceptional cases, open air cremation is illegal in Western countries, while collective funeral pyres are outright unimaginable, challenging the most deeply rooted taboo. The figure of Antigone has shaped Western culture along with the idea that mourning cannot occur without the dead body – any replacement of which appears unacceptable – whose remains are an object of devotion, of veneration, of self-identity memory[32]. At the same time, the unbearable sight not only of the dead but also of the dying body paradoxically underlies a historical process of progressive and ineffable concealment of death.

3. Ecological death

Actually, the "sustainability" of cremation is controversial.

Cremation requires a lot of fuel and is responsible for millions of tons of carbon dioxide emissions every year. The combustion of a single corpse, indeed, produces an average of 534.6 pounds of carbon dioxide. Besides, the presumed chemical contamination of human bodies – particularly the mercury in dental fillings, widely used in the past decades – may undermine its employment too. Realistically, teeth will be extracted from corpses as naturally as other thanato-aesthetic treatments used to prepare the dead body for its final journey. Whereas this problem must undoubtedly be solved upstream, before the human body contaminates the earth and contributes to the fatal impoverishment of the soil – the main source of the climate crisis – the alarm has provoked a discussion about "green death"[33].

Today's alternatives are diverse and respond to a multiplicity of beliefs, sensitivities, as well as living conditions and environmental contexts. Underlying the new "techniques" of dead body treatments is the predicted carnage that will affect a large number of human beings in the near future – the chronological end of the boomers generation. On a political level, the end of the very idea of man as supernatural being poses the question in terms of a paradoxical nemesis. The generation that is most responsible for intensifying man's negative impact on natural resources could literally repay the damage with the "sacrifice" of its members' own bodies for the good of the next generations. After all, that is the very epitome of circular economy (Fig. 4).
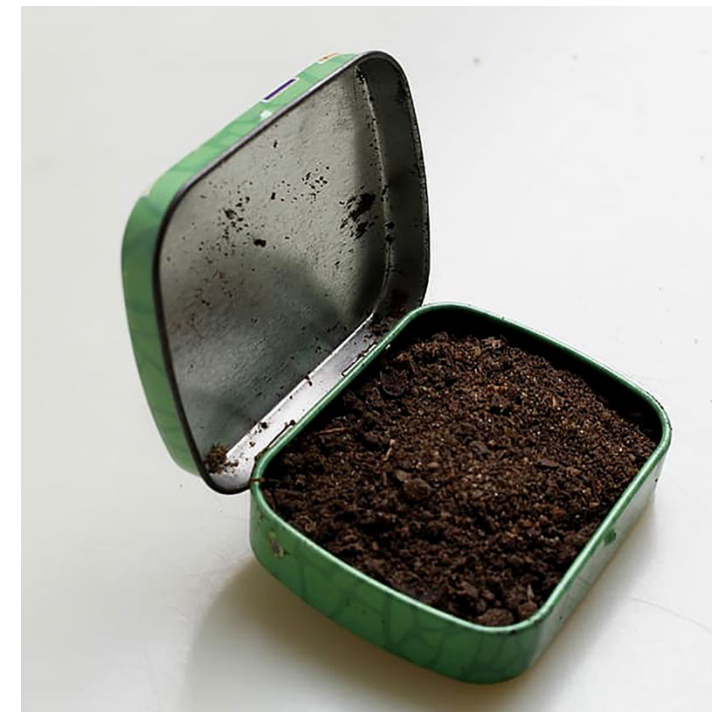

Fig. 4

In reality, these are mostly experimental practices, viable in a few American states now pioneering design methods and technologies for the disposal of human remains. In most Western countries, legislation is still very restrictive due to the previously mentioned taboos.

The so-called water cremation, or "aquamation"[34], based on alkaline hydrolysis, is a process that disposes of human remains by placing the body in a pressurized reusable vessel filled with a mixture of water and potassium hydroxide, heated to a temperature of around 160 °C. In four to six hours, the body is reduced to its chemical components: porous white bone remains that, similarly to cremated remains, can be stored in an urn or scattered; and an organic liquid, either disposed of through the sewer system or used as soil fertilizer.

The idea of the human body ending up, like generic organic waste, in a dump, scandalizes us. Yet, aquamation may even acquire a poetic undertone and be seen as a ritual purifying bath, a return to the element that gave us life, a symbolic immersion in the underworld, a plunge into eternity, resembling the 5th-century BC fresco of the "Diver" portrayed in a Paestum tomb. Thus, Egyptian *mastabas* and Nuragic sacred wells come to mind, along with the architecture of the *mikveh* in Judaism: water devices employed for ritual purposes symbolizing the cycle of death and rebirth.

In recent years, another "technique" has been tested in North America as an environment-friendly alternative to burial or fire cremation, which turns human bodies into about 30 square metres of soil fertilizer. Much like our ancestors, and their livestock, for tens of thousands of years, the naked corpse is placed directly into a natural burial ground in a pleasant environment – such as a wood, a meadow – or, similarly to aquamation, in a reusable vessel filled with biodegradable materials. In the "terramation"[35] process, oxygen flows through the vessel and stimulates microbes in the body resulting in its transformation into nutrient-dense soil within about a month.

Beyond the ecological foundation of the natural organic reduction of human remains, not universally supported by the scientific community, such "green death" questions the whole approach to death in Western cultures. Except for what can be truly considered a "sylvan burial", banned in many countries, technological aspects generally prevail over the rest in experimental body disposal techniques. For just that reason, their impact on society is comparable to that of fire cremation in the 19th century, when it accelerated the reduction of human remains to about 2 kilos of ash through the sophistication of rapid combustion technology.

Even then, the gap between ethical motivations and practical constraints due to the restrictions imposed by current regulations – in conservative societies reluctant to give up control over human bodies – was evident in the "character" of the spaces. Despite the desire to transform the spaces of cremation, aquamation and terramation into attractive places, they are still felt as industrial facilities where the process of "thanatocracy"[36] to which human beings submit themselves even before death in the name of medical and scientific achievements, comes to an end.

In addition, the reduction to organic material to be scattered and con-fused with the organic materials of the earth implies a radical rethinking of the very notion of memory and thus of architecture as a construction of memory devices[37].

4. Composting death

In the apocalyptic storytelling that supports some theories of the Anthropocene, the dying planet, plundered by the drive of colonialism and capitalism, is depicted as a desolating and hopeless "still life", where the survival of human beings is already irreversibly compromised. To invert this cynical point of view, the dying planet may rather be understood as an endless, stratified fossil of human and non-human remains turned into humus – or compost – that feeds future living beings.

Compost – from the Latin *com-positus,* "to place together" – or decayed organic material, commonly prepared by decomposing plant, food waste, recycling organic materials and manure, used as a fertilizer for growing plants, has a weird, both etymological and semiotic resonance with an "inclusive" idea of home, which goes far beyond the domestication of Nature. As a metaphor, compost has recently become a broad concept encompassing a revised relationship between humankind and the environment, aiming at overcoming the modern binary and linear approach to human history, in favour of a hybrid and "ecologized thought". In this respect, Manuel De Landa's interpretation of human history as an "unfolding immersed in a cauldron of non-organic life", where the organic and inorganic mixture becomes the "raw material for further mixture"[38] and for the emergence of new, hardly predictable, living systems is indeed relevant.

Accordingly, evolution is not measured in terms of biodiversity, that is the specialization growth, literally the "fabrication of new species", but rather as the ability of species to be adaptive and *symbiotic* with the environment. "Evolution does not go from something less differentiated to something more differentiated", Gilles Deleuze and Felix Guattari argued in 1980, further declaring that "the term we would prefer for this form of evolution between heterogeneous terms is 'involution', on the condition that involution is in no way confused with regression. Becoming is *involutionary*, involution is creative"[39].

The multi-species ability to "become-with", i.e. the ability to adopt a strategy comparable to that of bacteria, which organize themselves into more complex systems in order to survive a hostile

environment, implies a "persistent intimacy between strangers"[40]. Donna Haraway defines this mode in drastic terms, stating that "living is composting", that is "making kin" and actually "making oddkin" – the neologism that "unravels the ties of both genealogy and kin, and kin and species"[41] – as an enjoyable earthly survival strategy. In such a multi-species assemblage process, a "multi-species ecojustice" can be achieved, not only within, but even beyond the boundaries of the known world, in search of solidarity with the chthonic forces, with the dead and the extinct. "Sym-chthonic kin", literally tying kinship with chthonic forces (from the Greek *chthonios*, meaning "under, within, or belonging to the earth and the seas") seems to be the final step towards this "humusity"[42] – another brilliant term coined by the American philosopher to describe the next future when "communities of compost" will replace humankind, and its arrogant ways, and take charge of the Earth. In her storytelling, the "Children of Compost"[43] choose apparently inhabitable places, wasteland, exhausted fields, to take care of them, and turn them into interspecific "refuges", in a dynamic, anarchic mess of diverse bodies (Fig. 5).
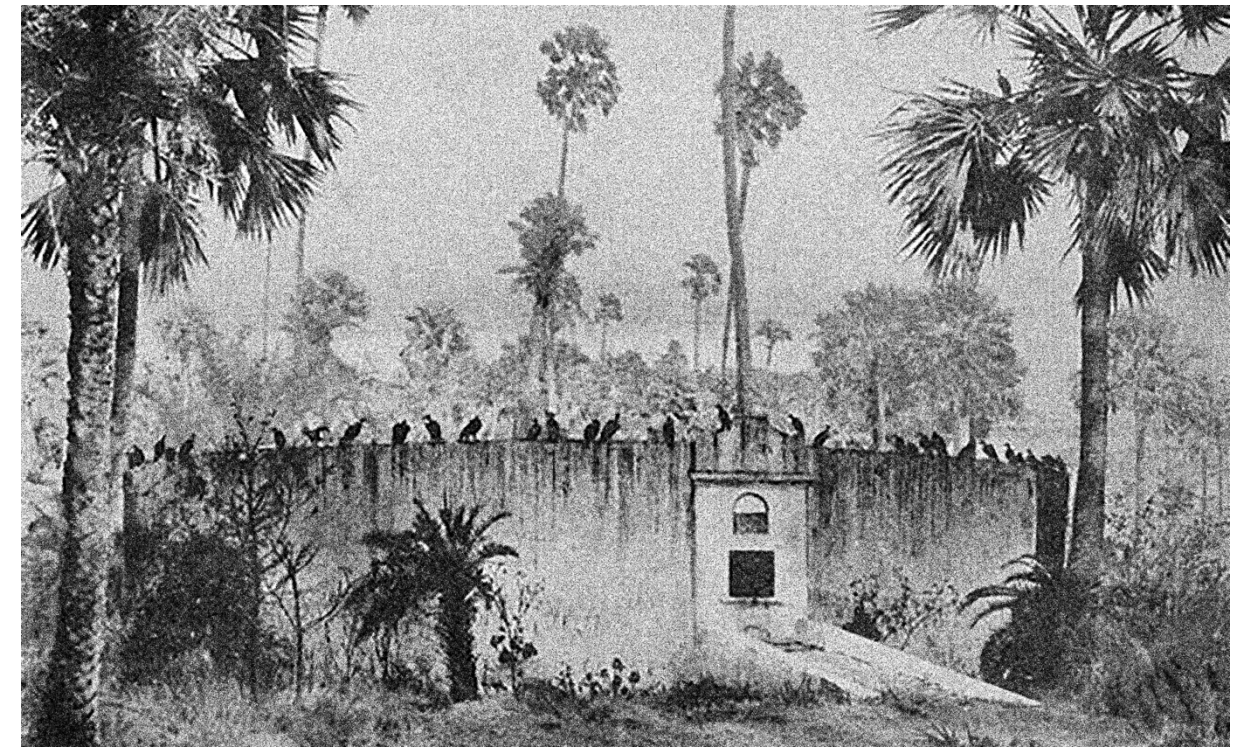
Fig. 5

French landscape architect Gilles Clément's memorable description of the so-called "planetary garden" comes to mind, where the planetary "*brassage*" – i.e. the rebellious, parasitic, generative forces that tend to expand the global mixing of species – fatally reshape urban regions, seas and areas still unexploited or "secondarized" by human activities[44]. Should this idea of occupying seemingly inhabitable places be applied to the dead, to human remains, a different perspective of post-anthropocentrism would finally emerge, where the domination of nature over culture would be accepted in death without scandal, and therefore anonymous, disordered, decomposed forms of dispersal and displacement of human remains would be embraced.

To use the leftovers of the contemporary city, abandoned infrastructure, unfinished buildings, as an opportunity to foster the planetary *brassage* is not such a far-fetched idea. It is well-known that Arnold Böcklin's famous painting, *Isle of the Dead,* was inspired by the English Cemetery in Florence, a patch of land used for non-Catholic burials – an unusual roundabout where the frenetic life of the city and the stillness of the cemetery merge seamlessly. Ultimately, it is about looking at inhabitable places with a creative mindset and transforming them into myriads of communities of compost, into lands for the humusity to which all of us are, in all likelihood, bound to.

Notes

1 Judith Butler, *Notes toward a performative theory of assembly* (Cambridge, MA: Harvard University Press, 2015).
2 Michel Foucault, *Power/Knowledge. Selected Interviews and Other Writings, 1972-1977* (New York: Pantheon Books, 1972).
3 Norbert Elias, *La solitudine del morente* (Bologna: il Mulino, [1982] 1985).
4 Among the first to speak of the "crisis of death" in modern societies was Edgar Morin, *L'Homme et la Mort* (Paris: Seuil, [1948] 1976).
5 Before 2020, an event that awakened some interest in the disciplines of space was the exhibition curated by Alison Killing and Ania Molenda *Death in the city* a social-political research on architecture for death. In 2014, they presented the project *Death in Venice* at the Venice Biennale. (See: https://deathinthecity.com/).
Recently the rich publication of Ines Testoni. *Il grande libro della morte* (Milan: Il Saggiatore, 2021).
6 Philippe Ariés. *L'Homme devant la mort* (Paris: Seuil, 1977), 659-711.
7 A summary of this concept in Leonardo Caffo. *Fragile Humanity. Il postumano contemporaneo* (Turin: Einaudi, 2017).
8 Zygmunt Bauman. *Mortality, immortality and other life strategies* (Bologna: Il Mulino, 2012).
9 "There is no culture without a grave, there is no grave without culture: the grave is at the very least the first and only cultural symbol", asserts René Girard, *Des choses cachées depuis la fondation du monde* (Paris: Grasset, 1978), 109.
10 Adolf Loos, *Ins Leere gesprochen 1897-1900* (Brenner-Verlag, Innsbruck: veränderte Auflage, 1932), 255.
11 Caterina Padoa Schioppa. "Postcards from the underworld. The ash trail from Palermo to Trieste" en Mosé Ricci (ed. by). *MedWays Open Atlas.* (Siracusa: Letteraventidue, 2022), 826-837.
12 Predrag Matvejevic. *The Mediterranean and Europe* (Milan: Garzanti, 1998), 141.
13 Jean Baudrillard, *L'Échange symbolique et la mort* (Paris: Gallimard, 1976), 35.
14 The documentary "Les cimetières: lieux de vie et terrains de jeu du sauvage" on radiofrance (November 1, 2022) only mentions French cases, but the phenomenon is spreading to all European countries. (https://www.radiofrance.fr/franceculture/podcasts/de-cause-a-effets-le-magazine-de-l-environnement/les-cimetieres-lieux-de-vie-et-terrains-de-jeu-du-sauvage-1229998).
15 In the Western countries, the modern cemetery, born in the aftermath of Napoleon's law prohibiting the city of dead to be built within the city of living, developed into different types – e.g. monumental cemeteries, park-cemeteries, palace-cemeteries. For more on the architecture of cemeteries, among others: Mauro Felicori (ed. by), *Gli spazi della memoria. Architettura dei cimiteri monumentali europei* (Rome: Sossella editore, 2005).
16 Lee Edelman, *No Future: Queer Theory and the Death Drive.* (Durham: Duke University Press, 2004).
17 Donna Haraway, *Staying with the Trouble: Making Kin in the Chthulucene* (Durham: Duke University Press, 2016).
18 The subject has been addressed from various perspectives by: Philippe Ariés, cit.; Michel Ragon, *Lo spazio della morte* (Naples: Guida, 1986); Edwin Heathcote. *Monument builders: modern architecture and death* (Wiley: Hoboken, 1999).
19 Jean Baudrillard, *L'Échange symbolique et la mort* (Paris: éd. Gallimard, 1976), 202.
20 James Hillman, *The Dream and the Underworld* (New York: Harper & Row, 1979).
21 The catalogue for the exhibition *Inferno* at the Scuderie del Quirinale in Rome (October 2021 - January 2022) contains many essays addressing the relationship between death, myth and art. Jean Clair (ed. by). *Inferno* (Milan: Electa, 2021).
22 Ernesto De Martino, *Morte e pianto rituale, dal lamento pagano al pianto di Maria* (Turin: Einaudi, 2020), 57.
23 Ibid, 58.
24 The Catholic Church still places many constraints on how and where ashes may be stored, ranging from the prohibition on keeping them in the domestic dwelling to scattering them in the air, on the ground or in water. This confirms that the prejudice against the practice of cremation is very much in evidence today. In: *Instruction Ad resurgendum cum Christo, on the burial of the dead and the preservation of ashes in the case of cremation.* (http://www.vatican.va/roman_curia/congregations/cfaith/documents/rc_con_cfaith_doc_20160815_ad-resurgendum-cum-christo_it.html).
25 The first modern cremation took place in Milan on January 22, 1876 in the Tempio Crematorio (Crematorium Temple) at the Monumental Cemetery, by means of a gas-powered apparatus designed by scientists Giovanni Polli and Clemente Clericetti, which is depicted in numerous illustrations. About three kilograms of ashes, dust and tiny bone fragments remained of the Freemason industrialist Alberto Keller, who had financed the construction of the Crematorium Temple. In that same year, the Milanese Cremation Society was founded and later the first Cremation Societies (So.Crem) were set up almost everywhere that, over time, amidst prohibitions and prejudices, allowed the development of cremation in Italy.
26 Data extracted from the website of The Cremation Society (https://www.cremation.org.uk)
27 Duccio, Demetrio, *La religiosità della terra: una fede civile per la cura del mondo* (Milan: Raffaello Cortina, 2013).
28 An in-depth study on this typology was published by Vincent Valentijn, Kim Verhoeven (eds. by), *Goodbye architecture. The architecture of crematoria in Europe* (Rotterdam: Nai010 publishers, 2018). See also: Tom Wilkinson. 2016. "Typology: Crematorium". *Architectural Review*, no. 1436.
29 Pierre Giraud, *Les Tombeaux, ou essai sur les sépoltures* (Paris: Hachette Livre Bnf, ed. 1801).
30 Caterina Padoa Schioppa, "Architectures for Cremation / Architectures for Cremation". *Abitare la Terra*, no. 56, 2021: 34-39.
31 For more on this debate see: Becky Little (November 5, 2019) "Little The environmental toll of cremating the dead. As cremation becomes more common, people around the world are seeking greener end-of-life options". National Geographic (https://www.nationalgeographic.com/science/article/is-cremation-environmentally-friendly-heres-the-science)
32 Antigone's cry claiming the law of eternity – that is the law of Themis more archaic than that of Zeus, an unwritten law preceding divine laws – is not isolated, all Greek tragedy reflects on the theme of burial as a founding act of the polis and its laws. "A capital work for our civilization", the philosopher Massimo Cacciari defines it, Sophocles' Antigone from the 5th century B.C. is the tragedy that challenges the relationship between *nomos* and *polemos*, between the positive law of the fathers and the radical otherness that relies on divine laws. Massimo Cacciari, "La parola che uccide", in Sophocles (5th century BC): *Antigone* (Turin: Einaudi, 2007, 3-11).
33 The theme of "green deat" was well summarised in the article: Allie Yang (February 24, 2023) "Rest in ... compost? These 'green funerals' offer an eco-friendly afterlife". National Geographic. (https://www.nationalgeographic.com/environment/article/rest-in-compost-these-green-funerals-offer-an-eco-friendly-afterlife).
34 For more, see: Agence France-Presse, (January 2, 2022) "What is aquamation? The process behind Desmond Tutu's 'green cremation'". The Guardian. (https://www.theguardian.com/world/2022/jan/02/what-is-aquamation-the-process-behind-desmond-tutus-green-cremation).
35 For more, see: Ritu Prasad, (January 30, 2019). "How do you compost a human body - and why would you?". BBC News (https://www.bbc.com/news/world-us-canada-47031816). Also the website of Katrina Spade, founder of *Recompose* and pioneer of human composting. (https://recompose.life/).
36 Jean Baudrillard, cit., p. 35
37 Erwin Panofsky, *Tomb sculpture. Its changing aspects from Ancient Egypt to Bernini* (New York: Abrams, 1964); Edwin Heathcote. *Monument builders: modern architecture and death*, cit.
38 Manuel De Landa, *A Thousand Years of Nonlinear History* (New York: Swerve Editions, 2000), 25-26.
39 Gilles Deleuze, Félix Guattari, *A Thousand Plateaus: Capitalism, and Schizophrenia* (Minneapolis: University of Minnesota. 1987), 262.
40 Lynn Margulis, *Symbiotic planet: a new look at evolution* (New York: Basic Books, 1998).
41 Donna Haraway, *Staying with the Trouble: Making Kin in the Chthulucene* (Durham: Duke University Press, 2016), 143-149.
42 Ibid, 89-141.
43 Ibid, 151-194.
44 Gilles Clément, *Manifeste du tiers paysage* (Paris: Sens et Tonka, 2014).

Image Captions

Fig. 1. The painting by Calcedonio Reina, *Amore e morte*, 1881 (Catania, Ursino Castle Civic Museum) represents the Baudrillard's concept of "dominicality of death". In the hybrid space of the church, the clandestine encounter between two lovers next to desiccated corpses would appear normal.
Fig. 2. Pierre Giraud, burial incineration monument, 1974.
Fig. 3. The Manikarnika Cremation Ghat on the Ganges river, Varanasi, Uttar Pradesh, India. © Arian Zwegers
Fig. 4. A box of soil fertiliser, this is human composting.
Fig. 5. Early 20th century drawing of the *dakhma* on Malabar Hill, Bombay (Project Gutenberg archives). The Zoroastrian Tower of Silent is the emblem of an "open house" or "interspecific refuges" for the "global mixing of species", made of organic and inorganic bodies.

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Biography

Caterina Padoa Schioppa (Rome, 1974) is architect, Ph.D., MA at the Architectural Association, founder of padOAK studio and Associate Professor of architecture and urban design at the Department of Architecture and Design at Sapienza University of Rome where she is also member of the Doctoral Board of the Programme "Architecture. Theories and Design". She is a member of the scientific editorial board of Ardeth. She authored many essays and articles on architecture and landscape theory. Recurring research themes are the problematic node between diagrammatic thinking and architecture finitude, as well as the impact in architectural theories of the complex and ecological thinking. Since 2018 she has been investigating the architecture for death and the architecture for rituals in the post-secular society. Among her books: *Transcalarity and Adaptability in Landscape Urbanism* (Aracne, 2010), *Kongjian Yu. 1998-2018* (Libria, 2019), *Vector Architects* (Libria, 2021).

Notes for an androgyned architecture
Gender migrations in contemporary architecture

Parisi, Luisa

Sapienza Università di Roma, DIAP – Dipartimento di Architetturae e Progetto, Roma, Italy, luisa.parisi@uniroma1.it

Abstract

Architecture, gender and sexuality are not crystallised categories but interconnected processes in constant change and redefinition. If social constructions of gender identities and sexualities produce spaces - designed or constructed, represented or imagined, collective or individual, public or private - at the same time the spaces themselves produce identities. "Architecture", argues Beatriz Colomina in Sexuality and Space (Princeton University Press, 1993) "is not simply a platform that accompanies the viewing subject. It is a viewing mechanism that produces the subject. It precedes and frames the occupant."

Avoiding disciplinary monolingualism, feminist critique has been particularly effective in mobilising the possibilities of Derridean deconstruction in architecture to enable an ongoing critique of binary oppositions, but especially of separate spheres or the 'public-private' division of gendered space that is manifested. This study, in fact, draws attention to spaces marginalised within gendered binaries in traditional architectural discourse, such as the domestic and the interior, and/or positioned as terms that transcend this binary distinction, such as the marginal, the between, the everyday, the heterotopic and the abject.

Starting with Bruno Zevi's text, written in L'Espresso in April 1982 about the feminist movements of the 1970s that affected architecture, citing the courageous ethical-social initiatives protesting a misogynistic discriminatory custom, we investigate Zevi's question to female architects " [...] Instead of the positivity of difference, why not embrace an androgynous integration?".

An androgynous architecture challenges identity-based categorisation. Without necessarily getting rid of them, it calls for a renewed understanding and critique of spaces not as places created specifically for a community, but rather as mutable, performative, context-dependent and relationship-dependent places in their defiance of heteronormativity, and even homonormativity. To alleviate the weight of old prejudices and cultural connotations and to overcome the issue of gender in architecture, the image that is proposed, therefore, is of an androgynous architecture, which is conceptual and energetic, embodied and emotional, abstract and welcoming, elected to challenge the fixity of form, norm and identity.

Key words: queer theories. feminism. modern architecture. androgynous body. gender binary.

Architecture, gender, and sexuality are not fixed categories but interconnected processes in constant flux and redefinition. If social constructs of gender identities and sexualities shape spaces - whether designed or constructed, represented or imagined, collective or individual, public or private - these spaces, in turn, influence identities. As Beatriz Colomina argues in her work "Sexuality and Space,"

"Architecture is not merely a stage for the observing subject; it is a viewing mechanism that shapes the subject, preceding and framing the occupant."

In 1977, the Brooklyn Museum in New York City hosted the groundbreaking exhibition "Women in American Architecture: A Historic and Contemporary Perspective," showcasing the work of female architects for the first time. Starting in the late 1980s in the United States, a new generation of architects emerged within the context of a university paradigm favoring transdisciplinarity, leading to the development of new academic content. Figures like Beatriz Colomina, Mark Wigley, Joel Sanders, and Mary McLeod, among others, proposed a fresh approach to architecture and its subjects, focusing on underrepresented minorities in terms of gender, race, and sexual orientation.

How can the methodologies, tools, and research of gender studies - and, more broadly, queer and postcolonial studies - be integrated with architectural history in a multidisciplinary and innovative academic framework? How can gender studies offer alternative approaches to historical narratives and challenge established values in constructing architectural history? What are the intersections between architectural practice, modern architectural history, and gender studies? In a broader sense, how can we incorporate gender studies into contemporary architectural theory, criticism, and practice?

This paper seeks to delve into the role of gender in contemporary architecture and analyze how spatial design can contribute to creating more inclusive, reflective, and gender-diverse environments. Through a review of the literature and exploration of theoretical and practical approaches, several key aspects related to gender in architecture will be examined. Concepts such as androgyny, gender neutrality, and inclusive spaces will be explored, along with the impact of architecture on gender dynamics in contemporary society. The overarching goal is to emphasize the importance of considering gender in architectural design and to provide insights into the creation of spaces that foster equality and inclusivity for all.

1. Gender as a social construct

While feminist discourse in architecture emerged in the 1970s, discussions regarding the relationship between gender and space are gaining theoretical momentum in academia. Bridging the gap between theory and practice, as well as between architecture and other disciplines, the influential feminist projects of the 1990s raised significant issues, particularly the critique of disciplinary boundaries and a heightened political focus on subjectivity. The 1990s witnessed an increasing relevance of identity politics centered around factors such as class, gender, race, ethnicity, and sexuality. In 1998, Alice T. Friedman's landmark book, "Women and the Making of the Modern House" (Yale University Press, 1998), explored the connection between architecture and gender, especially in the context of modernism. Friedman critiqued the standardization, hegemony, universality, and stereotypes prevalent in architecture, signaling a shift in perspective. New tools, including subjective constellations, perspectives from marginalized groups, the female and male gaze, and queer architecture, have proven instrumental in reshaping the narrative of modern architectural history and the contributions of architects within it.[1]

In 1970, the Women's Revolt Manifesto first appeared on the walls of Rome, advocating that "the personal is political." This collective drew attention to the specific oppression experienced by women, characterized by society's control over their bodies. The acknowledgment of female physicality and otherness, compared to a hegemonic norm, was already widespread before the 1970s, often originating from the analysis of domestic spaces and expanding to encompass the entire urban environment. This includes positivist narratives from the 19th century that shaped the field of domestic economy, which was predominantly female, influencing not only private spaces but also public ones. This trajectory extended to scientific management, impacting urban design and household management at various scales. Other strands of thought, more experimental in nature, proposed innovative social, spatial, typological, and distribution solutions, always rooted in female experiences and bodies. These ranged from kitchenless houses to cooperative housekeeping models, exemplified by Melusina Fay Peirce, and extended to boarding houses and women's clubs that marked the emergence of female professionals. Notably, Charlotte Perkins Gilman's utopian narrative "Herland" (1915) described a city planned by a women's community, alongside other pilot experiments, dystopian visions, reformist approaches, and new planning ideas.

In avoiding disciplinary narrowness, feminist critique has effectively employed Derridean deconstruction in architecture to challenge binary oppositions and the "public-private" division of gendered space ingrained in traditional architectural discourse. This study underscores spaces marginalized within gender binaries in architectural discourse, such as domestic and interior spaces, or those transcending binary distinctions like the marginal, the in-between, the everyday, the heterotopic, and the abject. In 1969, Robert Sommer proposed the concept of a "personal space" accessible and comfortable for both sexes, emphasizing that spaces should respect the needs and preferences of all genders and avoid reinforcing gender stereotypes.

Building upon Michel Foucault's biopolitics and feminist, queer, and transgender perspectives by Judith Butler, Teresa De Lauretis, Donna Haraway, Susan Stryker, and others, architecture is redefined as a biopolitical technology influencing the production of gender and sexuality. This exploration delves into how political and sexual identities are shaped through architecture, examining the relationship between gender, sexuality, techniques of vision and surveillance, the construction of public and private realms, and the production of bodies. Architecture goes beyond geometrically defined structures and enclosures, becoming a lived environment where cultural processes, gender interactions, and modes of sexual desire continually unfold. Architecture operates as a political technology influencing body, gender, and sexual normalization.

As transgender activist and theorist Lucas Cassidy Crawford notes in reference to Joel Sanders, "architecture is not a simple or neutral aesthetic category to which gender is merely applied." Instead, architectural forms and gendered bodies mutually reinforce each other. As an art intrinsically linked to the body, architecture plays a vital role in shaping matter according to ideas, actively participating in the rational, non-material, and ideal realms. Judith Butler's perspective on the body as "Not a being, but a variable limit, a surface whose permeability is politically regulated" extends to architecture and space. Niki de Saint-Phalle's 1962 work "Hon-katedral," as a feminist architectural piece, blurs the lines between body and site, intertwining them and offering experiences that correspond to bodily sensations, validating a sense of corporeal self. Architecture and the body are seen as dynamic and potentially permeable boundaries, constantly shifting in cultural significance.

2. Androgenicity and gender neutrality
Any discussion of the relationship between architecture, gender, and sexuality necessitates deconstructing binary visions prevalent in architectural theory. It calls for a renewed understanding and critique of spaces not as rigidly defined for specific communities but as malleable, performative, context-dependent, and relationship-dependent places, challenging heteronormativity and homonormativity. Advances in neurobiology, endocrinology, and gender studies enable a more precise examination of historical architecture theory, shedding light on its persistent gender biases and inherent misogyny. To address gender in architecture, one can consider the concept of androgynous architecture, which embodies both conceptual and energetic qualities, is grounded in embodiment and emotion, and combines abstraction with inclusivity.
The concept of androgyny has roots in Plato's Symposium, where the androgyne represents the ideal of wholeness symbolized by the completeness of spherical bodies. However, contemporary interpretations of androgyny go beyond longing for wholeness; they challenge the fixed boundaries of form, norms, and identities. Androgynous architecture creates a new artificial entity, embodying fluid and shapeless attributes. This perspective offers a critique of norms from a queer feminist standpoint, expanding the possibilities within architecture. As Judith Butler suggests, the repetition of norms can lead to breaking free from them, opening the door to something different.

Androgynous architecture challenges identity-based categorizations without necessarily eliminating them. It calls for a fresh understanding and critique of space, viewing it as mutable, performative, context-dependent, and relationship-dependent, resisting the constraints of heteronormativity and even homonormativity. To alleviate the weight of historical biases and cultural connotations and to address gender in architecture, an image of androgynous architecture is proposed. This androgynous architecture is both conceptual and energetic, grounded in embodiment and emotion, and characterized by abstraction and inclusivity, challenging the rigidity of form, norms, and identity.

**3. Architecture's ge*ndering language*
Language serves as the primary tool for conveying political shifts, describing works of art, and expressing oneself. Research has demonstrated that different spoken and written languages, as well as dialects, construct distinct imaginaries among speakers and shape diverse modes of thought. Language constructs and modifies our perceptions of external space.

According to Adrian Forty[2], architecture comprises three key elements:

1. The material product, i.e., the physical building.
2. The images, including photographs of the building and drawings, which form a universal code understood by all, as well as a specialized code decipherable by a limited audience.
3. The words, encompassing discourses on architecture and buildings generated by academic and professional figures.

As Forty explains, language is not an essential component within the architecture system, given that "the critical vocabulary has nothing to do with things per se but rather with the encounters one has with things, and it is in its role as a constructor of experience that language acquires value." My objective is to examine how language has influenced gendered identities and how the architectural experience has evolved since modernism, when gendered language appeared to be on the verge of disappearing. Indeed, the practice of gender attribution, or gendering, in the specific language of architecture originated during the Renaissance. Architects, artists, and scholars saw a need to develop an architecture-specific vocabulary to structure ideas and judgments. Adrian Forty's book lists various critics and artists, including Bernini, Sir Henry Wotton, and architect Nicholas Hawksmoor, who described classicism using contrasting and binary adjectives, primarily focusing on masculine and feminine attributes. For instance, a masculine building conveyed traits of firmness, decorum, simplicity, and virility, making it suitable for public and majestic spaces. Conversely, feminine architecture was often seen as ambiguous, delicate, and ornamental. With few exceptions, male architecture was considered superior to its female counterpart. While the former exhibited clarity of purpose, incorporating decorative elements only when essential, and conveyed solidity and durability, the latter allowed for a certain degree of vagueness and ambiguity, primarily because its function was thought to be captivating. An example of this gendered language can be found in the association of architectural genres with classical orders. In this context, Sir Henry Wotton, in his 1624 book "The Elements of Architecture," wrote:

"The Doric, as the most solemn of the orders, is more suited to works for civil use than those that follow, as it bears more masculine traits (...). The Ionic, on the other hand, is characterised by a sort of feminine suppleness which, as Vitruvius stated, rather than reflecting the forms of a trivial housewife, recalls the sober elegance of a Matron's dress (...) The Corinthian is a column, lasciviously adorned like a courtesan, and has much of the place where it was born: Corinth, undoubtedly one of the most extravagant cities in the world"[3].

This gendered language persisted in architecture until the modernist era. Even though it appeared that gendered language in architecture had fallen out of use during this period, an examination of the specific language employed in architectural discourse suggests that the organizing framework provided by gender had not been abandoned. When scholars and architects ceased to define architecture in gendered terms, as was the case during the modernist era, the identification of a superior architectural project as masculine continued to prevail in technical language. Notably, the language used to describe and discuss buildings and architectural structures, spaces intimately connected with bodies and their inhabitants, historically characterized the feminine as a weak entity and the masculine as a dominant one. Therefore, before considering the form, colors, and protection of bodies chosen by future architecture, it is crucial to contemplate the words that will be used to describe it.

4. Trajectories
Given that space is not neutral but rather reflects and reinforces the prevailing power structures in society through a binary structure that separates the feminine from the masculine, the private from the public, an interdisciplinary analysis of space employing a queer transfeminist approach becomes imperative. The goal is not only to deconstruct and unveil the power structures inherent in architectural structures within urban spaces but also to contribute to a narrative that is notably absent in architectural history. In "Anal Terror," Paul B. Preciado explains that the conditions of oppression and resistance characteristic of the sexual revolution of the 1960s have not disappeared but have rather shifted and expanded into various discourses. Preciado writes:

"The sexual revolution extends into queer and trans groups, among migrants and exiles, among refugees and stateless people, giving rise to collective sexual, affective, social and amorous practices that demand a new sexual institutionality, a new social contract. [...] [The sexual revolution] is on the march in every struggle for access to hormones and generic medicines, to administrative processes and documents without the stigma of gender and sexuality normalisation, in every act of dissident disidentification, in every affirmation of transforms of embodiment and sexuality that exceed not only the gender binary but also the heterosexuality/homosexuality opposition. [...] Our social landscape consists of an infinite multiplicity of hybrid and mutant beings."[4]

Therefore, queer theory can be defined not only as the study of sexual oppression but also as a radical and open contestation of how subjectivity is produced in the postmodern era. Jane Rendell highlights the importance of projects that prioritize questions as the central principle of research rather than solely seeking solutions, as these projects tend to generate objects that critically reconsider the parameters of the problem itself. Rendell identifies five prevalent themes in spatial practice: collectivity, interiority, otherness, materials, and performativity. These themes hint at emerging forms of creativity rooted in an experimental, performative, and ethical orientation to the world. Rendell states:

"Silent protest, sharing-contrapposition-connection, navigating through intersectionality, carnivalesque intervention, urban curation, instructive conversation, creating time, softening hard things, acting, flirting, transversal pedagogy, producing spaces of feminist anticipation, rewriting a vision of the city, introducing counter-narratives, playful resistance, foregrounding new and old radicalisms, decolonising thinking, building alternative futures, performative and ethical orientation to the world."[5]

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Biography
Luisa Parisi Luisa Parisi is a PhD student in "Architecture. Theories and Design" at the Sapienza University of Rome. Graduated in Architecture with a dissertation in architecture design named "Actions of architectonic disobedience. Naples as laboratory", she explored architectural spaces through the lens of gender and queer theories. Intentioned to proceed her research studies in the field of Architecture & Gender, she collaborated as part of her Erasmus Traineeship with CRIMSON Historians & Urbanists, Independent School for the City and International New Town, in Rotterdam, Netherlands – where she organized and managed events and labs such as "Citizens of the Anthropocene" and "Taking back housing". In the meanwhile, she has produced several articles for the magazine Platform – Architecture & Design. Luisa Parisi is now investigating the relationship between Architecture and the creation of subject(s), thus exploring new perspectives for architectural history through feminist theories. She is also co-founder of Traccia, an audio magazine of theoretical architecture criticism that uses sound to transform the way that architecture is understood beyond the domain of the image and print media.

P.V. (Dromo)logies
From the Ultracity to the Hypercity

Sánchez Tappan, Juan Carlos
SOFAR Academy, Barcelona, Spain, jcst@espacio-sofar.org

Abstract

In the foreword of Paul Virilio´s book "A landscape of events," Bernard Tschumi refers that in a series of texts from 1984 to 1996, P.V. establishes the "procès verbal" of our contemporary society, where time has overcome space as our main mode of perception.
I would argue that P.V.´s contribution to a meaningful contemporary understanding of architecture is based on two key words: He coined the term "Dromology" (from the greek δρόμος "dromos") the logic or science of speed, and "Ultracity" to develop his vision of the transformation of "la ville" into the cities of beyond, the over expanding urban realm, as the last field of resistance of space and the body over the acceleration of new technologies.
His collaboration with Braque and Matisse (50s), as student of Merleau Ponty in la Sorbonne (60s), and the exchanging concepts with Deleuze (80s), allowed him to waive concepts from different disciplines - somehow repetitive, fragmentary and inconsistent - into an extensive written body of work.
I propose four key terms: The "Bunker", his research of the Atlantic coast-wall; the "Oblique," his collaboration with Claude Parent (1963-1968) and their built work based on a new slanted order; "Dromology" and "Ultracity" as a continuous thread through which P.V., resists the increasing speed of communication technologies and the recovery of the body.
John Armitage, expert in Cultural Politics, considers P.V. was a "hypermodern" or "new modern," solving P.V.´s non-fitting work within post-modernism.
Coinciding with the fifth anniversary of his dead in September 2018, I consider very relevant to revisit P.V.´s terminology. I coin the term "Hypercity" to face the urbanisation of technologies, and for their humanisation in search for more sustainable and healthy environments to the fully recovery of our bodies.

Key words: "Bunker", Oblique", "Dromology", "Ultracity", "Hyper-city".

Foreword

In the foreword of Paul Virilio´s book (P.V.) *A landscape of events*,[1] Bernard Tschumi refers that in a series of texts published from 1984 to 1996, P.V. established the "procès verbal" of our contemporary society, where time has overcome space as our main mode of perception.
I had the opportunity to interview Paul Virilio in la Rochelle (2005) [2]. He was a radical architect, a visionary urbanist and a prize-winner French critic, distinguished philosopher in technology, author of phrases like "the screen has become the square of the city."

Fig.1

This paper continues my doctoral research and thesis (2021), where I condensed the Virilian cosmogony in four terms: **Bunker**, **Oblique**, **Dromology**, and **Ultracity** as forms of "resistance" before his corresponding technologies to recover the body from the impact of "technologies."
During nearly two decades, I conducted an archaeological approach compiling and digging through his intense and fragmentary French style writing, 43 books written in French between 1975 to 2013, out of which 32 have been translated into English, and only 23 books have been translated into Spanish, plus an uncountable number of articles, contributions, and interviews, to various languages.
In the second volume of my thesis, I cartographed his dispersed body of work in an Atlas. Maps and diagrams, routes and quadrants to guide the reader to navigate through his written work, and better understand the evolution and continuity of his most relevant concepts.
Furthermore, this paper continues to develop the "**Hypercity,"** a term that I coined to update and criticise P.V.´s concepts into the actual urbanization of technology.
Coinciding with the fifth anniversary of his dead in September 2018, I consider very relevant to revisit P.V.´s terminology. P.V.´s position in the architectural discourse offers a very interesting distance for architects and urban thinkers, as he is not anymore an author of our time but he is still very relevant.

1. Paul Virilio (P.V.)

Paul Virilio (Paris, 1932-2018), born to an Italian communist father and catholic Breton mother, lived the allied bombing in Nantes during his childhood.
He studied German and French phenomenology with Maurice Merleau-Ponty at la Sorbonne; was the last of a group of distinguished French thinkers in the second half of the 20th century, such as Michel Foucault, Gilles Deleuze, Jean Baudrillard, and Jaques Derrida.
Later on, his documentation of his exploration at the Atlantic Wall, confronts him to a radical different vision of the war model, as the truly precursor of technological advances, economy, and the city.
"The Fonction Oblique" (1966), by the hand of Claude Parent (C.P.), their seminal manifesto, resists and re-defines modernism architectural discourse, under the term "Hypermodernism," coined by John Armitage.[3]
After having participated in the student uprisings in May 1968, P.V. was nominated professor by students. He taught at La Ecole Speciale d'Architecture (E.S.A.) from 1969 to 1999; he was the Director from 1972-1975.
His first book, *Pure War*, ironically, was not written by him, it is a result of the edition by Semiotex(e) of the interview (1982), held with his friend and colleague Sylvère Lotringer, who introduced P.V.´s thinking to the culture and the avant-garde architecture in the U.S.
He was a provocative theorist, winner of the Grand Prix National de la Critique Architecture (1987), prolific writer, social activist, radical architect, and visionary urbanist.
After leaving his academic activity at E.S.A., and after the 9/11 tragic events, P.V. dedicates himself near a decade, to studying the accident and the city, as a visible form after the impact of speed and acceleration upon space and matter. He warns about the inherent consequences in technology, as a

double-edged sword, pointing out such relevant concepts as "the university of disaster," "city of panic," "grey ecology," "the futurism of the instant," in advance to "cities of beyond" and "the ultracity."

He was a professor at the European Graduate School, was author and curator of the exhibitions: "La Fonction Oblique," "Bunker Archeologie," "Ce qui arrive and Terre Natale."

P.V. passed away in September 2018. His written work, in the phenomenology line of Merleau-Ponty, provides a unique criticism before the repercussions of the impact to new transportation, information, and communication technologies (TIC) on the space and the body; as well as its affectation on society and the city, in relation to the architecture and speed. The urgency to recover the body before the potential and the threat of the accident, and the influence of TIC´s to the growing technological culture that favours comfort and commoditization.

2. Roots and sources

P.V.´s production may be divided into two large stages: The exploration and architectural practice (1950-1969), and the theoretical and written work stage starting in 1969.

His contribution may be firstly divided in an artistic phase, in collaboration with talented artists like: Henri Matisse (1950), Georges Braque (1955), and Le Corbusier (1955); followed by the architectural phase in Architecture Principle (1963-1968), his manifestoes, projects, and built works with Claude Parent (1964-1969); and years after, his collaborations with Daniel Libeskind (1997), Diller & Sofidio+Renzo (2008), and Lebbeus Woods (2010).

For the 60s decade, the post-war reconstruction in France had not yet finished. But, the architectural proposals already talked about multi-disciplinarity, the need to mix the arts by joining painters, sculptors, and architects. A radical architecture emerged of productive logical systems with networking nature, means of communication, or events. "The Fonction Oblique" of Architecture Principe co-existed with radical projects, such as "New Babylon" of Constant; "the connected cities" of Archigram; the "unitarian urbanism" of the Internationale Situacioniste, influenced by Henri Lefebvre; "Non-stop City" of Archizoom; and the manifesto of Aldo Rossi, "L'Architecture Della Citta" (1966); and "Complexity and Contradiction in Architecture" of Robert Venturi (1966).

Not only his architectural contribution adds light to an already fertile period of the 1960s architecture in France; but furthermore, most of his legacy is based on his critical body of work, where different vectors converge in a prodigious moment of French critical thinking.

3. Reasons that justify the choice

P.V. represents a key figure to understand the relationship between new T.I.C, and transportation with the territory.

P.V. was one of the most important interpreters of phenomenology in recent architecture and urbanism, for his catastrophic perception of the technology induced by war and speed. One of his most important input is to have revealed the logic of speed as political conditions of the 20th century, through a critical analysis of modernism and modernity, with which he significantly contributed to postmodern theory, to the world culture of information, to critical cultural theory, to social and political science, and to architecture philosophy, with an extensive influence in various countries and in an ample range of disciplines.

To deepen into his terminology has the benefit of becoming familiar with the legacy of Husserl and Heidegger; phenomenology, existentialism, hermeneutics, structuralism, deconstructivism, including modernism and postmodernism.

Therefore, to study his writings on war and territory, technology and resistance, art and the body, space and the city, is necessary in order to understand the fast transformation that has affected our physical environment (space-time), by advance military technologies, the speed of mass media, the acceleration of digital technology, and the exponential growth of the quantity of data and information.

For one part, there is the validation of recovering the body, last front of resistance before TIC, and the social networks; to again have contact with the other and re-think the new public spaces; especially, at times marked by our great dependency on TIC for the performance of almost any type of activity.

For the other, the city as a place for a new radical urban architecture, able to incorporate the instantaneity of communications, a perpetual connectivity, and the normalization of total mobilization, to reprint again the importance of the body and place; as well as to resolve the division between real space vs. virtual space, and the need to redefine our input to the society as architects and urbanists

There is also the opportunity to make his concepts more readable, in spite of the fragmentation, repetitiveness, and lack of depth in his writings.

4. Terms

As a critic, fascinated by, but resistant to technology, speed, and the impact in architecture and the city, P.V. developed four key terms:

The "Bunker," his research of the Atlantic coast-wall; the "Oblique," his collaboration with C.P. (1963-1968), their built work based on a new slanted order; "Dromology" and "Ultracity," all conform a

continuous thread to resist the increasing speed of communication technologies and the recovery of the body.

Although in life, he received criticism from geographer Nigel Thrift about his ideas of the city; and from Alan Sokal and Jean Bricmont, for abusing scientific concepts wrongly cited, and of terminology without sense[4]; I would argue that his significant contribution to a meaningful contemporary understanding of architecture is based on two key terms:

He coined the term "Dromology" to refer to the logic or science of speed, and "Ultracity" to develop his vision of the transformation of "la ville" into the cities of beyond, the over expanding urban realm, as the last field of resistance of space and the body over the acceleration of new technologies.

4.1. Bunker

In *Bunker Archeology*, his research of the Atlantic Wall of the Nazi Germany - the defensive system which expanded from France to Scandinavia during the Second World War - links up the impact of military technologies in the organization of the territory.

The bunker gets its form from the resistance to the speed of projectiles. It is independent from the ground, yet is part of the territory.

Documenting the different typologies of the bunker, on a variety of objects along the Atlantic Coast, helped P.V. prove the principles of phenomenology. The confinement that the body experiences inside the bunker contrasts with the protection given by its massive - more than 66 cms. thick walls - structure. The bulk, self-supportive structure of bunker, makes the object independent, deployed from the ground but attached to the territory.

Years later, together with C.P., they built the bunker church of Saint-Bernadette du Banlay in Nevers (S-B.d.B), a built manifesto in which P.V. would project his fascination for the Bunker's negative architecture, its resisting capacity before war technologies and the speed of missiles.

S-B.d.B., materializes during the 60s, the resistance of P.V. and C.P. before modern architecture, the inflection of the "Oblique Function" in the architectural discourse of the 70s, 80s, and 90s; and continues being an important reference to those architects who explore strategies to recover the body from the commoditization dragged by advanced technologies, and to resolve the incorporation of the virtual into the experience of real space.

Adam Sharr, British Architect, links P.V.´s architecture with Peter Zumthor's [5], based on the resistance quality of architecture before the deterioration of form and significance, an architecture of enclosure, isolated in its interiority.
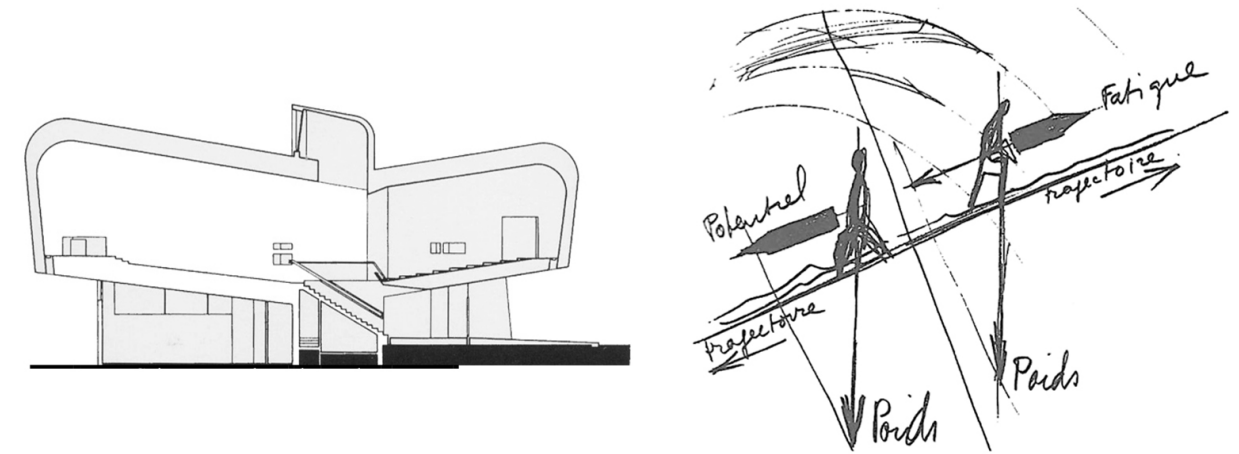
Fig.2

4.2. Oblique

The "Oblique Function" was conceived in the 60s in collaboration with C.P., as a new order against orthogonality. The inclined plane as motor to move the body, generating fatigue when ascending, and potential when descending. A manifesto to resist the emergence of communication technologies and the invasion of the TV at home during the 60s.

The oblique, explored the adherence of the body to different grades of inclination in order to define livable forms of occupation and circulation. The behaviour of the body in inclined spaces, orientation, balance, effort, alternative trajectories, etc.

The "Oblique Function" is tested for the first time, in S-B.d.b.(1963 -1966), materializes the convergence of C.P.´s discourse, influenced by Andre Block's ideas of the fracture; with the phenomenology that P.V. develops in his research on the Atlantic Wall, and his extraordinary contribution for experimenting with different degrees of inclination.

During the 90s, a generation of architects and designers replicated the formal seduction of the inclined and its qualities, thanks to the possibilities of Design Assisted by Computer (D.A.C.), and the use of digital programs for representation that left behind, in many cases, its content principles upon the body; resistance vs. potentiality; the association between circulation and habitation; form and structure (structural furniture); and the activation of the ground.

Many years had to go by for the anticipated concepts of the "Oblique Function" to be revived for experimentation. Homothetically are the proposals of architects who had, sporadically, contributed with P.V. and C.P., such as Jean Nouvel, Daniel Libeskind, and Coop Himmelb(l)Au. There is also the difference of scale dilemma, between S-B.d.B. with the Opera of Oslo (Snohetta, 2007), the Yokohama Port Terminal (FOA, 1995), the L'Ecole d'Achitecture in Nantes (Lacaton & Vassal), etc.

However, our future architectures and typologies continue to be pending for the introduction of time into space; the search for an instability to activate inhabitants; for developing the potential of "inclisite"[6] in the urban scope; for the idea of how gravity, lightness, and suspension can increase sensorial tactility and motricity in the domestic rituals; and the vanishing of binomials as exterior-interior or circulation-inhabitation.

4.3. Dromology

"Dromology" (from the Greek δρόμος "dromos") is his treaty on space occupation by speed, as a new field of study of architecture, the city, the body, and society.

For one part, it reveals the loss of relevance of physical space due to the immediacy, ubiquity, and synchronization of technologies. For the other, it affirms that without time there is no space, and without space there is no body, demanding for architects a solution for resolving the relation between real space and virtual space.

Technologies of transmission, information, and communication (T.I.C.) have a deep impact on space. Speed and acceleration, make T.I.C technologies ubiquitous, instantaneous, and synchronous taking away the relevance of physical space and becoming only visible with the accident. The occupation of space by speed and the irrelevance of space before time, made P.V. raise his hopes on the public space of the city, as the last front of resistance before the advance of the urbanization of technology, and the endo-colonization of the body.

Dromology condenses P.V.´s concern about the effects of speed and acceleration on space, architecture, and the city. The compression of time in each aspect of our contemporary daily life that disregards and even breaks up space.

There is a big disconnection between the actual digital design methodologies used to conceive architectural environments, and the physical experience for what they are finally built.

What will architecture become with the advent of spaces defined by technologies of communication instead of construction techniques? With what sense something can be built when interfaces replace surfaces, and instantaneity reduces space to nothing?

Fig.3

4.4. Ultracity

The concept of "Ultraville"(outre-ville), was first described as "Omnipolis" in *L´Art Du Moteur* [7], briefly elaborated in *Vitesse et Politique* [8], and in *La Bombe Informatique* [9]

However, the term "Ultracity" is fully developed in: *Le Futurisme de l'instant* [10]. The second part of the book "Ultraville" is dedicated to the term "Ultracity".

The term connects the connotation "Ultravi" (ultralife) with the word ville (city).

The term "Ultracity" summarises P.V. concern and criticism about space-time, speed and the urban realm, the relation amongst cities and technologies of information and communication, about the quotidian digitalization in the form we perceive and experiment the city in the cyber-space era.

In his book *Lost Dimension*, the chapter "The Overexposed City," claims that the urbanization of real space gives pace to the urbanization in real time. While real space privileges the continuity of living experience in physical spatiality, virtual space privileges the discontinuity of living experience and physical rupture.

In the "Ultracity," very high-buildings urban developments, make masses of people sedentary in non-exit vertical alleyways (cull-de sacs in the air), which confine motionless bodies transported by elevators; while the technological mediated inter-urbanity, drifts migrations between cities. Both phenomena co-exist with the digital city of screens and mobile devices that redefine the new places.

The "Ultracity" concept allows us to understand how the mobilization of nomad and multi-ethnical populations, guideline now the economic rhythms, the security strategies, and investment flows.

However, I would argue that the "Ultracity" is characterized by two contradictory phenomena:

For one part, an increasing sedentarism provoked by the new doors and windows of the technological interfaces and the application of domotics. Spectating citizens adrift in here and now migrating to nowhere. As a consequence, there is almost no need to activate our body in the contemporary panorama of our urban environment, defined by corporate spaces and over congested territories.

For the other part, an increasing nomadism defined by uncontrolled migration, flows to cities that provoke an increasing babelization, an uncontrollable demographic concentration, and an excessive technological and energetic dependence. We are experiencing, at a worldwide level, an exodus of millions of people moving due to affectations caused by natural and artificial accidents, war, and an unbalanced distribution of resources.

Fig.4

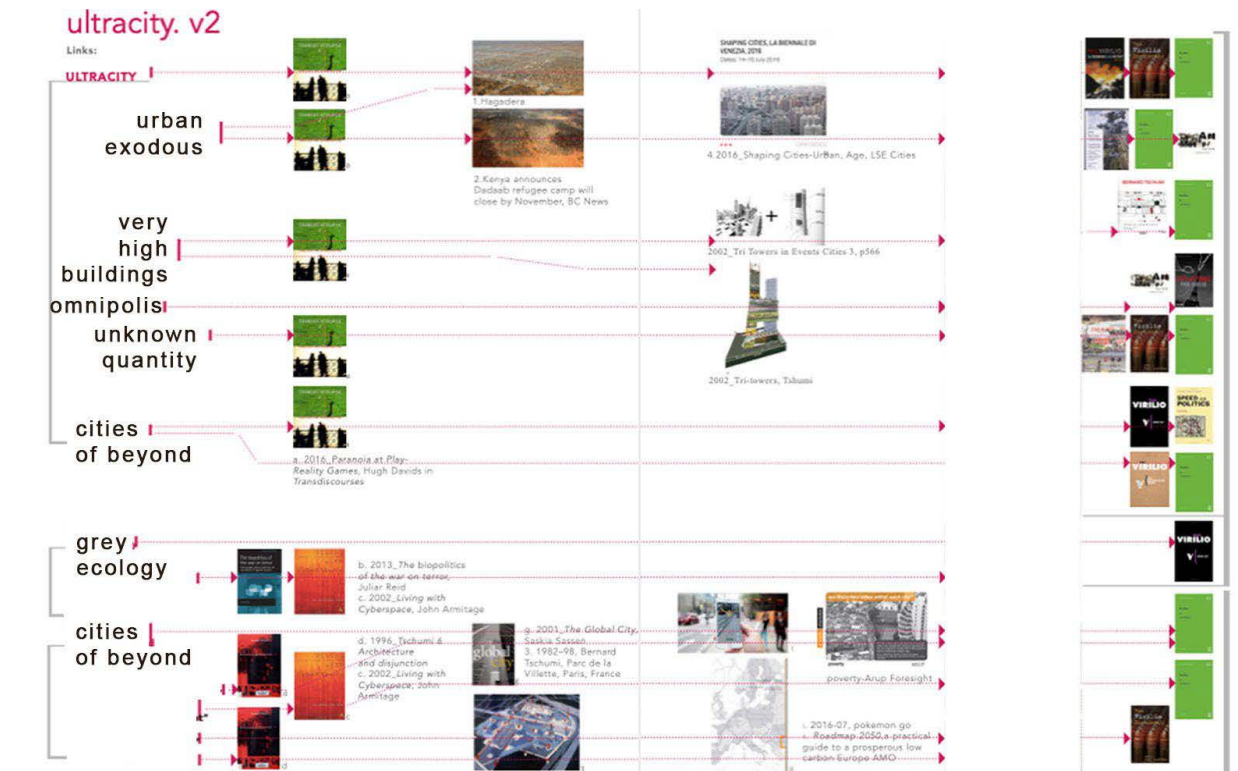In the "Ultracity," P.V. foresees the return to the body in the emergence of new urban drifts, inter-urban and intra-urban migrations. It is the increasing ecological awareness together with the imperative need to provide healthy environments that make resistance to technology still possible.

P.V. changes his belief from architecture to the city, as the social laboratory for antonomasia, and as

the last bastion of resistance of space before the acceleration and speed of technologies. The final stronghold to recover the body from the immobility to which is subject by faster means of transportation; from the confinement in very high buildings; from tele-activities that screens made possible and gained terrain during the pandemic. Public space as refuge for co-living and the arena for in situ cultural exchange before virtuality, the creation of sustainable spaces, and the generation of healthy environments.

4.5. From the "Ultracity" to the "Hypercity"

John Armitage, expert in Cultural Politics, considers P.V. having been a "hypermodern" or "new modern," the term solves P.V.´s non-fitting work within post-modernism. In accordance with his term, I propose the term **"Hypercity"** to face the urbanisation of technologies and their humanisation in search for more sustainable and healthy environments to fully recover of our bodies.

Fig.5

5. New relations between words, concepts and practices

The **"Hypercity"** to study the information processes by which we experience our urban realm, as the iPhone had a profound impact on how we operate in our existing cities. To cope with big data as informational architects adopting a hybrid approach, where technology becomes as extension of the designer's imagination in the information age of the network society. As Jane Jacobs reminds us, the city as the result of incremental behaviours by a multiplicity of users at street level.

Considering that in year 2050 two thirds of the population will live in cities, and the importance of recovering the body which has become global after the coronavirus crisis, the **"Hypercity,"** is also to face the age of A.I.

P.V.´s theoretical arguments deviate the central importance before in space to time; before in architecture to urbanism; before in form to content. These are consequences of his comprehension of the impact of the screens and mobile devices in our lives; of the control, the surveillance, and the militarization of our urban environment; of the growing migration of people displaced by wars, by climate change, and their search for life better conditions amongst frontiers.

5.1. Real space and virtual space

P.V. is interested in digital technologies and the idea to rationalize them, humanize them, and incorporate them. He warned about the potential thread that each artefact generates its own accident; was convinced of the need of recovering the body from sedentarization, commodification, eugenics; and his calling out to the urgent conciliation between physicality and virtuality.

For P.V. the big problem of contemporary architecture is the temporal compression, "dromospheric pressure, " standardization and synchronization as the two sides of space-time. Architecture is not only vulnerable to bombs, but proves to be defenceless against the new digital information and communication technologies that transgress the doors and windows of our homes, reorganizing the time and the space we live in.

To a large degree, contemporary architecture is returning to abstraction, an abstraction that in most cases, does not go beyond merely formalism.

Real time demands from architecture the need and capacity for reacting before the demands of communication instantaneity, the virtual portals of big data, and serve the physical space as well as the virtual space. Housing must host the virtual space as facilitator for domesticity to link virtual space with real space, and so reduce the real-virtual gap.

It remains in us, architects and urbanists, to find the affinity of real space and virtual space, to solve the real space-virtual space divide, incorporating into our design and construction process new technologies; authorship techniques for the co-existence of mental images with design projects assisted by computers; strategies for the use of mixed programs, reinforced by augmented reality and artificial intelligence; the association amongst form, structure, program, and virtualization; construction and ecological codes for health planning to incorporate the Internet of things.

6. Potential of innovative perspectives and actions

On one side, there is the central idea of returning to the body in order to resist the negative consequences of communication technologies on the territory, and devices in people. On the other side, there is the idea of incorporating, rationalizing, and humanizing the new information technologies in order to reconcile the physical city and the digital city.

6.1. Resistance to technology

P.V.´s discourse was based on three main axes: Technology, resistance, and the body.

P.V., as an irritating catholic in words of Claude Parent, saw the attributes of divine totality reflected in technology: Omniscience, omnipresence, and omnipotence.

According to P.V., one of the most perceptible consequences of the irruption of new technologies of communications and speed, is the tendency to abolish time and space for having produced a general temporary dislocation-relocation, a total dissociation-relocation in which there are no specific places, instead the emission and reception of sensations.

He positions himself against to transportation and information technologies for their acceleration of the social, and the displacement of physical space by politics of speed.

6.2. Recovering the body

As a phenomenologist, the human body is central in P.V.´s work. He was concerned with the vanishing of the proper body after the dehumanize effect of technologies, by processes of endo-colonization [11] – Body, technology, and social nature

The affectation of speed in the body and in space describe the impact of technology in our lives, and they form the spine of P.V.´s phenomenological input to architecture and urbanism.

P.V. claims the urgency to return the importance to the body, by redesigning new social and spatial organizations; by rethinking architecture and the city. For P.V., the large urban concentrations are the origin and destiny of the urban exodus, of world-scale migrations, of a continuing nomadism in which the body reappears. But, along with its growing densification in the form of vertical urbanizations with generic typologies, the emergence of very tall buildings that sedentarize the body through the elevator as the most used vehicle. P.V. anticipates the need to reconcile the local physical city and the world virtual city, which tends to dissipate the body through communication networks.

7. Things and practices
7.1. Pandemic and the ecological model

Although the last pandemic did not have an impact on the city for long, it indeed accelerated tendencies, the technological adoption process in tele-activities as well as in solutions and devices for tracking and testing: artificial intelligence, mobile applications, fingerprint and facial recognition, etc. It catalysed the digitalization of public services. It has made tele-work, on-line education, and tele-medicine to become a norm. It has increased the gap between real space and virtual space, i.e., consider the two-meter interpersonal security distance in relation to the ubiquity of the screen.

The idea of the local was again revisited by the return of a new security. It made us recognize the interdependence between country and city; the need of a new urban-rural discourse, and to rethink the city values of density and compactness and the role of urbanism as a tool for a positive transformation.

Years before, P.V. already pointed out that those who are connected are at home anywhere; while those who are not connected are not home, nowhere. Although during the pandemic we counted on technology, which in a digital way takes us to ubiquity, those connected turned out to be anywhere at home, but confined everywhere.

COVID-19 raised the need to make the individual confinement compatible with the proximity of collective compactness; rethink the design of spaces that could facilitate new dynamics; adapt architectural typologies in order to increase the capacity of isolation. Private yet exterior spaces as Maria Buhigas suggested in *Confined in the City, Rock*: balconies, halls, large windows, grandstands, scaffolds, etc., which had been forgotten for aesthetic reasons (the weight of modernism), and for economic reasons (the weight of profit).

The socio-economic challenges that the pandemic brought up, force us to re-think how we can harness technology, of the need of more sophisticated mechanisms for statistical analysis, the value of data, the democratic control of personal information, the impact of technology for the right to digital privacy, in order to move on to an increasing social and urban resilience.

At present, the relationship between technological nature and the perception of human experience continues to be approached by Bernard Stiegler, French philosopher influenced by Virilio, in his trilogy "Techniques and Time" (1994, 1996, 2001).

7.2. Urban models

The outbreak of COVID-19 exposed both, the excesses as well as the deficiencies of the contemporary society, after being forced to reduce speed and put our fast ways on hold.

The crisis taught us the need to maintain a balance between density vs. compactness in our cities.
For P.V., resistance is to recover the proximity to real places and existing spaces.
The superblocks of Ada Colau in Barcelona, the 15 min. City of Carlos Moreno in Paris, and the Low traffic neighbourhoods in London are implementing initiatives that foster values of the city of proximity, which could count on the economical offer and the infrastructure to reduce emissions, decongestion, and optimize time to reinforce social cohesion. The mixture of residential neighbourhoods with commercial areas, work, education, and leisure, communities that produce and share food again, domestic and community orchards that use composts, etc.

8. Future visions and transformations

P.V. challenges us, architects, to rethink space before it disappears after the immense speed of technologies and the gravity of time.
After big data and augmented reality, in the next years we will face the burst of Artificial Intelligence (AI), and its impact in real space and the body. The question of how we adapt to technology and absorb it so it becomes a prosthetic extension to our bodies, is more relevant than ever.
Wolf Prix, of Coop-Himemb(I)au, is already using AI to improve the design process. Patrik Schumacher, of Zaha Hadid Architects (ZHA), has used AI to simulate the behaviour of occupants in its buildings.

9. Conclusions

Tschumi´s opinion is that architects must learn P.V.´s lessons about the analysis of the city and of architecture.
The "Hypercity" to rethink architecture and the city, to rethink time and space after the impact of digital technologies of information and communication.
P.V.´s preoccupation with technologies were related, on one hand, to their constructive, destructive, and transforming force upon the body, architecture, and the city; and on the other hand, the result in temporal compression, standardization, and synchronization.
Much of what is still relevant about P.V.´s contribution, is that technologies play a fundamental role in forming our individual and collective experience. We live in an exponential crisis of perception, precipitated by visual technologies of militarization and the incorporation of these technologies in the familiar environment on streets, homes, and in the daily living architecture. The "Hypercity" to solve the crises where the transparency and fluidity of media open up their pace through the solid geometry of buildings.
Since the 60s, the impact of technology, which accelerates the communications and transmissions, has been critical for spatial and social organizations, affecting the role of the body and questioning the importance of the physic space. Today is even more notorious for the effects of the Internet and the mobile phone industries, that generate a world dominated by the instantaneity, the ubiquity, and the omnipresence.
Paul Virilio´s thinking went way ahead of the development of the events in his time. Before the shift of the millennia, in relation with space, he anticipated matters of tele-presence against presence; tele-portation against presentation, highly relevant for the dominating tendencies for our times, as the virtual reality, augmented reality and AI.
The theoretical terms of "Dromology" and "Ultracity" are fundamental to approach the transformations caused by the digital space. The city, being today unthinkable without the convergence of the digital networks, undoubtedly represents the social laboratory by antonomasia. The "Hypercity" continues trying to recover the bodies of isolated individuals in the global society, uncommunicated despite the synchronicity of digital media.

Notes

1 Bernard Tschumi, "P.V.," in *A landscape of events*, Paul Virilio & Julie Rose (Massachusetts: The MIT Press,2000), viii
2 Paul Virilio, Juan Carlos Sánchez Tappan, Tilemachos Andrianopoulos, "Paul Virilio in Conversation," (London: AAFiles 57, 2008) 32
3 John Armitage, "From Modernism to Hypermodernism and Beyond. An Interview with Paul Virilio"," in *Paul Virilio. From Modernism to Hypermonernism and Beyond"* John Armitage (London: Sage, 2000), 16
4 Alan Sokal, Jean Bricmont, "Paul Virilio" in *Intellectual impostures*, (London: Profile, 1997), 169
5 Adam Sharr, "Burning Bruder Klaus: Towards an Architecture of Slipstream" in *Virilio Now*, John Armitage (Wiley, 2011) 30.
6 A Project of Claude Parent for inclined sites, 1974
7 Paul Virilio, *The Art of the Motor* (Minnesota: U. Press:1995 (1993))
8 Paul Virilio, *Speed and Politics* (Los Angeles: Semiotext(e): 2007 (1977))
9 Paul Virilio, *The information bomb* (London: Verso: 2000 (1977))
10 Paul Virilio, "The Ultracity" in The futurism of the instant (Cambridge: Polity, 2010 (2009)), 37
11 The possession or decomposition of the body by technology, or the dislocation of the body presence in the real space-time.

Image captions

Fig.1. Left. Interview with Paul Virilio at La Rochelle, May 2005. Right. Interview with John Armitage at Winchester, June 2016
Fig.2. Left. Section of Saint-Bernadette du Banlay, bunker church in Nevers, 1963-1966. Right. Oblique Function diagram, 1966.
Fig.3. Dromlogy in V.II of the PhD thesis: *Paul Virilio: Resistance to technology and the recovery of the body*
Fig.4. Ultracity in V.II of the PhD thesis: *Paul Virilio: Resistance to technology and the recovery of the body*
Fig. 5. Left. Media Burn-AntFarm, John F. Turner, 1975. Right. L.A.2049, Blade-runner 2, 2017

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Biography

Professor **Juan Carlos Sánchez Tappan** is a Mexican-Spanish PhD architect, educator and critic. He holds a Masters in Architecture from the AADRL (London). Founder Partner and Principal of STUDIO OF ARCHITECTURE RESEARCH, SOFAR (2003). Director of the Visiting Universities Mexico - Summer abroad program, and the Visiting Inter-Professionals B2B tour in Barcelona and London, in collaboration with FUNDARQMX. International Professorship at ITESM (Puebla, Torreon, Guadalajara, and Mex.): "Housing and metropolitan imaginaries." External Researcher at Anahuac (CDMX): "Urban sprawl, new territorial identities." He has been visiting lecturer at the Doctorate School ADD INIGE (IT); Texas A&M (US); Tung Hai University (TW); and London Metropolitan University. He was a member of the Urban Research Bureau, Urban Flashes, Metropolis graduate program in Architecture and Urban Culture. Interests: "IKIGAI urbanism," to identify the vocation of cities. "The Hypercity," to develop a built environment to foster the humanisation of technologies and recovery of the body.

Between *Bild* and *Bildung*
A Sample of Re-reading the Making of Architectural Knowledge

Sarıca, Sezin
Research Assistant, METU, Department of Architecture, Ankara, Turkey, sezins@metu.edu.tr

Abstract

This proposal relates to ongoing doctoral research, which discusses the making of architectural knowledge by theorizing the concepts of image and form regarding the German term *Bildung* (meaning culture, formation, education). *Bildung* is discussed with an apparent relation to the idea of "becoming". The etymology of the term is interpreted as closely related to architectural terms. Etymologically, *Bildung* is a derivation of *Bild,* and *Bild* is interpreted within its dual meaning as image and form. It means image, relating to imitation, and form relating to formation. The etymology of the term also refers to formative processes and static conditions (*bilden*: to form, to create, *Vorbild*: model, *Urbild*: origin). The concept of *Bildung* can be considered as existing between culture and enlightenment, practice and theory, society and individual, ontology and epistemology. Learning from the various definitions of *Bildung*, the relationship between *Bild* and *Bildung* gains significance in understanding the architectural knowledge within and between paradigms. The term is historical; therefore meaning of the term changes and recurs in time, since paradigms reverberate in a certain level of complexity that can redefine *Bild*, and thus, *Bildung*.

The theoretical-historical basis of the research expands from the nineteenth-century German architectural theory, institutions and production that can be considered as a transition from an ontological to an epistemological framework, defining architecture as knowledge (Schwarzer, 1995). Accordingly, the first step is to trace image/form double through the nineteenth-century German concepts of *Vorbilderbewegung*, which relates to singular and static images, and *Bildungsgesetze*, which are multiple form possibilities on the axis of tectonic theory. The intention is to trace *Bild* and *Bildung* as architectural concepts understood through their German meanings. However, learning from the productive tension between these two concepts, these words are interpreted beyond their etymologies to present a re-reading of the making of architectural knowledge. The proposal aims to expand the curation of objects related to the aforementioned double through architectural drawings. In so doing, the research aims to present different instances –especially drawings and representation modes- within architectural history. The image-form double is curated through drawings that can be a starting step for a speculative re-reading. This initial curation includes representational translations of image-form double as "pinned" and "iterated". The research follows the question: Can a framework be presented apart from the linearity of history, which depends on the concept of *Bildung* and its "double" references to *Bild* (image/form)?

Key words: *Bildung*, architectural knowledge, image, form, architectural drawing.

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1. Introduction

This text relates to ongoing doctoral research, which discusses the making of architectural knowledge by theorizing the concepts of image and form regarding the German term *Bildung* (meaning culture, formation, education). *Bildung* is discussed with an apparent relation to the idea of "becoming". The etymology of the term is interpreted as closely related to architectural terms. Etymologically, *Bildung* is a derivation of *Bild,* and *Bild* is interpreted within its dual meaning as image and form. It originally means image, relating to imitation, and form relating to formation. [1] Its etymology also refers to formative processes and static conditions (*bilden*: to form, to create, *Vorbild*: model, *Urbild*: origin). The concept of *Bildung* can be considered as existing between culture and enlightenment, practice and theory, society and individual, ontology and epistemology. Learning from the various definitions of *Bildung*, the relationship between *Bild* and *Bildung* gains significance in understanding the architectural knowledge within and between paradigms. The term is historical; therefore meaning of the term changes and recurs in time, since paradigms reverberate in a certain level of complexity that can redefine *Bild*, and thus, *Bildung*. The ongoing research aims to re-read the development of the last two centuries' architectural knowledge (texts, drawings, buildings) within the framework of *Bild* and *Bildung*. In so doing, it attempts to collect and curate instances within architectural history that will be pursued to understand the architectural knowledge beyond the frameworks of paradigms. In this regard, this text aims to present a sample of the fore-mentioned re-reading.

The paper is structured in three parts: **"understanding words", "tracing words", and "curating words".** The first part presents the etymologies and histories of the **"words"** *Bild* and *Bildung*. Through an intellectual history of the words, their relationship has been expanded and understood beyond the German meanings and reflected in the doubles of image-form. Looking into the theoretical and historical strands of these words within architectural knowledge, **"traces"** are found within nineteenth-century German thought as the concepts *Vorbilderbewegung* and *Bildungsgesetze*. These concepts are illustrated through two prints; the book "*Vorbilder für Fabrikanten und Handwerker*" by Peter Wilhelm Beuth and Karl Friedrich Schinkel, within the Vorbilderbewegung (the modeling movement) and the article "*Die Bildungsgesetze der Formen in der Architektur: Ein Beitrag zur Kenntniss der Entwicklung architektonischer Kunstformen*", by Friedrich Heinzerling. The textual and graphical traces of *Vorbilderbewegung* and *Bildungsgesetze* form a framework to re-read the making of architectural knowledge. The image-form double exemplified within nineteenth-century knowledge can be expanded to –before and after – the nineteenth-century. In so doing, the last part focuses on these doubles and curates words through "drawings" that can be a start for a speculative re-reading. This initial curation includes several representational translations of image-form double as "pinned" and "iterated". The paper aims not to present the evolving meanings of the words, but to present a sample of a re-reading on the architectural knowledge that stems from the etymological relations of *Bild* and *Bildung*.

2. Understanding Words: *Bild* and *Bildung*
Etymologies, histories

Reading into the architectural theory and history (especially in the German-speaking context), one can frequently encounter the terms *Bild, Bilder, Vorbild, Urbild, and Bildung*. This research stems from the curiosity about the relations and plural meanings of these terms, which reveals exciting connections to re-think within architectural knowledge.

To understand the term *Bildung*, an etymological explanation is necessary. However, this explanation is not to propose a historical analysis, but to re-interpret the term within contemporary context. The term *Bildung*, is a derivation from *Bild*(image). *Bild* originally means the image, imitation, form, and formation.[2] Being a religious concept from the fourteenth-century, *Bildung* is defined as a process, which has in the center, "an image of the deity thought as modeling, according to which man should be shaped."[3] Since it refers to the religious delineations, the linguistic root and derivatives of the concept inevitably involve the act of creation. The etymology of the term refers to creative and "formative" processes (*bilden*: to form, to create; *Bild*: image, picture, *Vorbild*: model). After 1700s the concept is started to be defined within philosophical and pedagogical contexts of thought and it has an extensive use especially in the late eighteenth and early nineteenth century. In his text from 1784, Moses Mendelsohn underlines the words 'enlightenment' (*Aufklärung*), 'culture' (*Kultur*) and 'formation' (*Bildung*). According to Mendelssohn, *Bildung* breaks down into culture and enlightenment: one relating to the past, existing culture and the other relating to the change and formative processes.[4] The concept evolved through time, changing within *Aufklärung*, re-defined within politics, education, social studies and even natural studies. Therefore, *Bildung* is regarded as a combination of multidisciplinary thoughts and has a variety of meanings in different fields. The emphasis is on "becoming" is mutual for each definition. In twentieth-century, Hans Georg Gadamer includes the hermeneutic significance of work of art and cultivation. He mentions the terms *Urbild* (origin, origin-

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form), *Abbild* (copy), *Vorbild* (ideal, model), *Gebilde* (structure, outline) and *Einbildungskraft* (imagination). He states that the unique relationship between these German terms cannot be reproduced in English.[5]

Within the intellectual history of the concept *Bildung*, we can mention a few scholars, who have an impact on the definition of modern idea of *Bildung*. To begin with, Johann Gottfried Herder is a significant figure. In the German historiography of pedagogical thought, he is seen as the founder of the secular ideal of *Bildung*, which is based on the interpretation of the concept within a broader field of thought. Herder adds the concept a critical value and relates it to an educational ideal that would have many projections on German thought and society.[6] He defines the historical process itself as the formation of humanity as a whole. Thus, the concept of *Bildung* can be defined as a part of his philosophy of history. The definition of *Bildung* within educational thought continued to be developed at the beginnings of the nineteenth-century. Philosopher Wilhelm von Humboldt, who co-founded University of Berlin in 1809, defines the concept within educational frameworks. He "advocates connecting 'objective knowledge/scholarship (*Wissenschaft*) with subjective cultivation (*Bildung*)'." [7] Humboldt defines the concept of *Bildung* included within the community of "university", an institution and a space in which individual and communal ideas can co-relate. Plural meanings of *Bildung* as culture and education can be followed by other definitions within history, including educational and psychological sciences. However, the details may be the focus of another work.[8]

Going back to Herder's understanding of *Bildung*, the twofold relationship between philosophical and natural theories can be underlined. According to Herder, "The individual is seen as a process of organic formation and growth and not as an atom of society or as an abstract generic, as in the naturalistic theories of the seventeenth and eighteenth centuries."[9] The idea of formation and growth as a part of *Bildung* concept has evident relation to the naturalistic theories especially culminated in the nineteenth-century. One of the Humboldt brothers, Alexander von Humboldt, has a specific interest in the idea of natural formation and growth in terms of geological and geographical knowledge. Another renowned scholar, Goethe, is also renowned for his ideas on natural history and *Bildung.* These juxtaposed relations within the framework of *Bildung* concept have an interesting quality, which has been deeply involved with architectural thinking. Barry Bergdoll also emphasizes "German integration of aesthetic and natural-historical research and thinking." [10]

Mostly elaborated within the nineteenth-century, the term *Bildung* with its modern connotation, is continued to be used within the following century as well. Tracing the nineteenth-century ideas, we can relate to the twentieth-century concept of *Bildung* re-defined within the hermeneutic philosophy. Hans Georg Gadamer's definition of *Bildung* is strongly dependent on the nineteenth-century ideas. In the twentieth-century, Gadamer worked on the aesthetic philosophy in a close relationship with hermeneutics. In his book, he refers to "*Bildung*" as a process of "forming the self in accordance with an ideal 'image' and he sees art as a crucial field within the conception of 'cultivation'".[11]He refers to Herder's definition, the etymology, translations, and ambiguity of the word. Grondin explains the plural meanings that Gadamer also refers:

> "The term "*Bildung*",… has several meanings in German so that it is impossible to give one single equivalent in translation: formation, culture, education." [12]

The translations of *Bildung* and *Bild* presents a plurality of meanings revealing a twofold structure for historical reflection: image and imitation vs. form and formation. In parallel to the intellectual ground of the nineteenth-century and its contemporary relations, in this work, the concept of *Bildung* is presented as a new definition for understanding architecture as knowledge and becoming associated with the changing concept of *Bild*. Here, "architectural knowledge" encompasses both theory and practice in architecture. Related to this idea, Schwarzer explains:

> "In contrast to architectural theory in the age of the classical treatise, there were in the nineteenth century both many more methods of argumentation and an undeniable rise in their level of complexity. With the demise of basic architectural concepts derived from ontological classicism - such as proportion, decoration, and propriety - architectural theorists were forced to approach architecture as knowledge and not essence, as becoming, not being."[13]

In this regard, the nineteenth-century gains significance in terms of its transitory position, which overlaps the double reference within the concept of *Bildung*. This double reference defines a framework for the understanding of the development of architectural knowledge through text, drawings, and buildings. Accordingly, in this work, an architectural curation between image and form is proposed as a historical reflection. On the one hand, *Bild* can be considered as a common and

immutable "image". When conceived as "image", the term *Bild* is defined by the rules and orders that dominated the classical paradigm. In other words, architectural formation based on "image" stands for the "imitation" of prior immutable images (*Vorbild, Urbild*), rather than any generative processes. Until the eighteenth-century, western architectural knowledge was dependent on the Vitruvian rules and proportional standards that are prior "images". Architects later improved and elaborated on these rules as part of the developments during the Renaissance. On the other hand, *Bild* can also be considered as flexible and mutable "form". When conceived as "form", the term includes the critique and interpretation of prior orders in the classical paradigm. In other words, architectural formation based on "form" stands for generative processes in which architectural elements are mutable and interpretable. After the eighteenth-century (including the late seventeenth-century), the prior immutable rules started to be critiqued and reinterpreted. Especially French thought started to question the validity of Vitruvian proportions and tried to understand the system in ways other than immutable images. The focus was on the architectural processes between geometrical figure and architectural form. Referring to post-eighteenth-century thought, this study uses the term "form" as its German meaning implies. However, according to the discursive translation between the languages, the study differentiates two "form"s. It is necessary to mention the difference between "form" and "*Form*". The translation of "*Form*" from German is significant for the modern paradigm since it transformed the existing meaning of "form" in the English-speaking world. Adrian Forty states that:

> "The German language (which is where the modern concept of form was principally developed) has a slight advantage over English for thinking about the problem, for where English has only the single word "form", German has two, "*Gestalt*" and "*Form*": *Gestalt* generally refers to objects as they are perceived by senses (their shapes), whereas *Form* usually implies some degree of abstraction from the concrete particular."[14]

After the nineteenth-century and its complex intellectual developments, a period of theoretical and practical unity emerged in the early twentieth-century.[15] However, this was later followed by a renewed interest in the avant-garde ideas of the nineteenth century, and a re-establishment of the diverse approaches within architectural knowledge. [16] The plural strands within architectural knowledge, which had been overlooked since the nineteenth-century, were rediscovered and revived. Framing these under the relations of *Bild-Bildung*, the plural approaches within architectural theory are defined within the recurring flux of "image" and "*Form*" that surfaced/re-surfaced in different discussions. [17] Accordingly, this text presents introductory samples that follows historical traces of *Bild* and *Bildung* (reflects as doubles of image-form, scenographic-tectonic) before and after the nineteenth-century.[18]

3. Tracing Words: *Vorbilderbewegung* and *Bildungsgesetze*
Nineteenth-century, Tektonik, architectural translations, image-form double

The theoretical basis of this research draws upon nineteenth-century German architectural theory considering the diverse range of productive intellectual ideas that still resonate within contemporary theory. Barry Bergdoll defines nineteenth-century thought as the seeds of contemporary ideas. He argues that these theories, once recognized outside of the idea of the nation-state, can become interesting heterogeneities that provide a fertile ground for architectural theory. [19] According to Bergdoll, many attempts have been made to reshape nineteenth-century discourse with the concept of conservatism. However, he says that although it emerged in the early nineteenth-century, "avant-garde" is mostly associated with the twentieth-century. The nineteenth-century invention of the avant-garde invites us to rethink forgotten relationships. This reason inevitably reveals the renowned unique knowledge of architectural relations that was particularly addressed by scholars such as Karl Friedrich Schinkel, Karl Bötticher and Gottfried Semper on the axis of *Tektonik* theory. Contrary to the conventions, these architectural theories were highly influential for the philosophers in the nineteenth-century.[20] *Tektonik* theory and related nineteenth-century theories have been discussed extensively in different frameworks. [21] Within the nineteenth-century, *Tektonik* (tectonics) became "the technical redefinition of architectural styles as structural systems composed of elements that served pragmatic as well as aesthetic functions." [22] Related to the discussion on tectonics earlier in the nineteenth-century, Hübsch mentions "formative factors" (*Bildungsmomenten*) that define style as a system that can be varied and re-interpreted. [23] According to him, style is not a fixed term related to periods and *a priori* ideals, but rather an analytical concept defined by changing "formative factors". [24] The diversity of definitions within tectonic discourse, contributed not only to debates in the century of *Verstandesarbeit* (understanding), but also to recent architectural knowledge.[25] Tracing the "words" *Bild* and *Bildung*, the doubles: joint-disjoint, ornament-structure, technical-symbolic form, and/or ontological-representational form are revealed as the related doubles that correspond to discursive strands in terms of both philosophical and architectural frameworks.

Tracing these doubles, one distinction is especially significant in this work: that between **Vorbild**erbewegung (the modeling movement, *Vorbild*: model) and **Bildung**sgesetze (the laws of generation/formation, *Bildung*: formation). Initially, two printed works were studied to illustrate the varying range of terms and representations within these two concepts. The first, *Vorbilderbewegung*, is a movement including not only model collections but also pattern books, with detailed drawings of historical prototypes of art, industry, and architectural ornaments, and from which models of the prototypes were produced, collected, and became a part of the creative processes. The collection of physical models and drawings was a projection of the process of understanding in the arts, industry and, inevitably, architecture. The related focus is on drawings from the book "*Vorbilder für Fabrikanten und Handwerker*" by Peter Wilhelm Beuth and Karl Friedrich Schinkel, within the *Vorbilderbewegung* (the modeling movement) of the early nineteenth-century. The book includes a precise survey of specific historical prototypes. The other focus dwells on the relatively obscure work of Friedrich Heinzerling, his only work on the methodology of design: the article "*Die Bildungsgesetze der Formen in der Architektur: Ein Beitrag zur Kenntniss der Entwicklung architektonischer Kunstformen*", published in *Allgemeine Bauzeitung* in 1869. [26] The title can be translated as "Laws of the formation/generation of architectural forms: A contribution to the knowledge of the development of architectural art forms". The publication includes multiscalar "laws", presenting both conceptual frameworks and form-*giving* methods. Here, the aim is not to make a direct comparison between two printed works, but to understand the changing range of terms and representations between image and form.

The first focus, "*Vorbilder für Fabrikanten und Handwerker*" includes a detailed survey of specific historical prototypes including transitional architectural elements such as cornices and capitals as a part of the catalog of ornaments consisting vessels, chairs and textile patterns. The book's textual and visual structure presents architectural transitional elements as stacked and frozen fragmentary models that are in the same sequence with vessels, frames and knitting patterns. Drawings present an advanced level of detail showing each and every geometrical reference. For instance, the text provides a detailed explanation and a table for Blatt 1 – 1a (Fig. 1a). Blatt 1 includes a stacked composition of various drawings of "helper" architectural elements. Blatt 1a shows mathematical drawings of these elements with apsis and coordinates, which corresponds to each element in the Blatt 1. The table presents the list of "*Verzierungen* (ornaments)" and "from which monument or where these elements are taken".[27] For each fragment, the architectural monument it belongs is listed (Fig. 1 top right). These "*Vorbilder*" (which can be translated to 'pre-images' in English) reveal the limits of historical prototypes. They can be regarded as a physical expression that marks the transition point to the possibilities of invention: from *Vorbilder* as frozen images, to *Bildungsgesetze* (laws of formation) as multiple forms. In contrast to their frozen existence, collections of historical models and survey drawings guided the architects and artists to develop hermeneutic cycles of creation. This contrast gave rise to various textual and visual representations of architectural transitional elements, which became more prominent towards the end of the century.
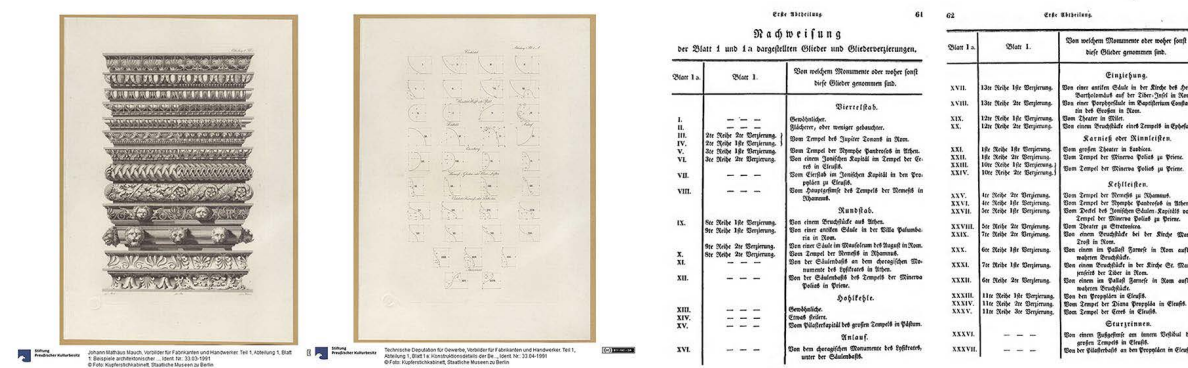

Fig. 1a.

The second focus, from the other end of the century, "*Die Bildungsgesetze der Formen in der Architektur*" is interesting in terms of its multiscalar "laws" presenting both conceptual frameworks and form-*giving* methods. The article presents an almost contemporary methodology on defining *Vermittlungsglied* and *Trennungsglied* (transition/mediation and separation elements). Heinzerling's representation emphasizes the geometrical formation of transition of parts. (Fig. 1b). He understood the development of tectonics under four acts: disposition, construction, composition, and artistic symbolism. Corresponding to these four concepts, he proposes four sub-forms: *Nutzform* (functional-form), *Werkform* (structural-form), *Begriffsform* (conceptual-form), and *Sinnform* (perceptual-form).[28]

These forms can appear independently, but only in their mutual amalgamation they reveal an architecturally perfect form.[29] The first stage (*Nutzform*) is related to the function and space definition. The second stage (*Werkform*) is related to the structure, to produce the greatest possible stability and resistance. The third stage (*Begriffsform*) is related to parts and their transitional relations. Lastly, the fourth stage (*Sinnform*) is the formation of these individual parts by means of essentially symbolic elements. [30] In terms of tectonics, Heinzerling not only presents a conceptual framework but also illustrates the physical development in scale of architectural line. After defining the function spatial necessities and structural composition, *Begriffsform* correlates with a twofold tectonic process: first, "the division of the building whole into its main parts or, the dissolution of the overall structural concept into its partial structural concepts" and second, "the mediation of those building parts into a building whole or, the combination of those building parts to form the overall building structure".[31] Heinzerling's twofold theory presents a design methodology on architectural transitions. The tectonic/formative transition in between two parts, Heinzerling defines "the law of separation/division (*Das Gesetz der Scheidung/Trennung*)" and "the law of relation/transition (*Das Gesetz der Beziehung/Vermittlung*)", which are based on same principles. Heinzerling explains the laws as: "the separation/division of any two adjacent structural form elements takes place either by creating a difference between them at the point of contact or, if they are identical at this point, by inserting a third form element that differs from them."[32] According to Heinzerling, "the relation/mediation of two different, architectural elements takes place through a partial similarity of their form." [33] He also illustrates and explains this "similarity" through drawings. These rules and related abstract illustrations (Fig. 1b) present possibilities of forms.
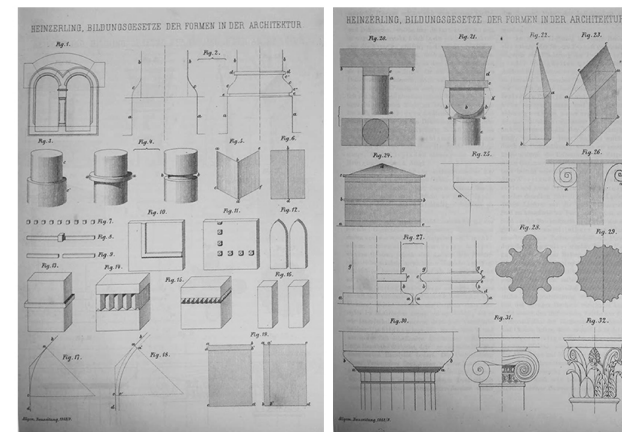
Fig. 1b.

The difference between *Vorbilder* as frozen images and *Bildungsgesetze* as multiple forms relate to a unique knowledge of dialectics of architectural thinking created within the same educational network. These concepts traced through the etymologies of *Bild* and *Bildung*, present a framework to look into image-form reflections. The following part will present samples of *Bild* as image and form; focusing on the representational translations as techniques/modes of drawing.

4. Curating words: *Bild*, pinned and iterated drawings
Representational translations

The etymology of the word *Bildung* and its historical traces *Vorbilderbewegung* and *Bildungsgesetze* helps to construct a framework to re-read the making of architectural knowledge. By comparing the specific works of Schinkel-Beuth and Heinzerling, we can identify similar examples and expand our understanding of the image-form relationship prevalent in the nineteenth-century. This allows us to explore the nineteenth-century and the periods immediately preceding and following it. This section presents an initial step in this speculative re-reading by examining several representational translations of the image-form relationship, specifically as "pinned" and "iterated". Following the concept of *Vorbild*, the representation modes that highlight the fixed conditions of *Bild* as image in "pinned" architectural drawings are collected. Accordingly, various sources including architectural drawings with scenographic emphasis are presented. Contrasting with the variety of the pinned set, following the concept of *Bildungsgesetze*, Redtenbacher's sequential diagrammatic drawings with tectonic emphasis are presented. The multiple conditions of *Bild* as form in iterated architectural drawings of possibilities/processes are collected.

4.1. *Bild* as image, *pinned* drawings
Tracing the inspirations of *Vorbilder*, in this part, the focus will be on the pre-nineteenth-century drawings to search for the definitions of *Bild* as (mostly) image. Architectural *Lehrbuch*-s inspired by

atlas, encyclopedia and lexicons as the methods and objects of storing knowledge present a variety of scenographic modes that "pins" architectural image.[34]

Christiane Salge has written a short article presenting the similarities between (renowned architect family/Bauakademie founders) Gillys' drawings from the beginning of the nineteenth-century and examples from Europe in the seventeenth and eighteenth centuries. Since the main challenge of the German Enlightenment was to create their own "style" by learning from the past, these parallels are interesting yet understandable. The specific technique is called "quodlibet"- a type of *Trompe l'oeil*. As Salge mentions, the technique of drawing refers back to the seventeenth and eighteenth-century paintings; however, the application of the technique within architectural drawings has gained less attention.[35] This specific drawing technique presents an illusion that positions the architectural image as the finished and found object. Although they gained less attention, the architectural drawings created with this specific technique is closely related to this paper's re-reading. The examples mentioned below are composed of drawings created by not only architects but also philosophers and scientists. These can be considered as representational translations of making of architectural knowledge.
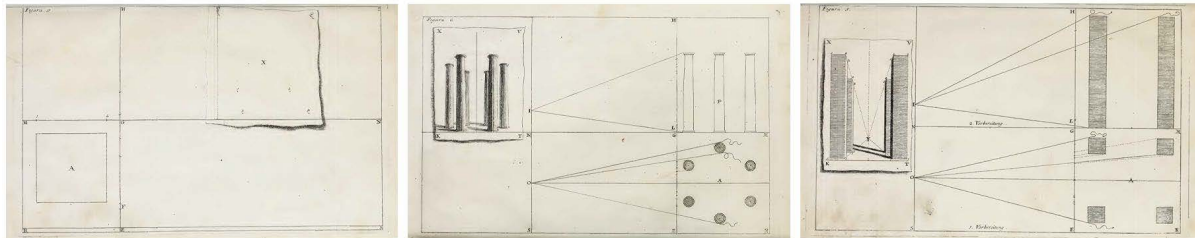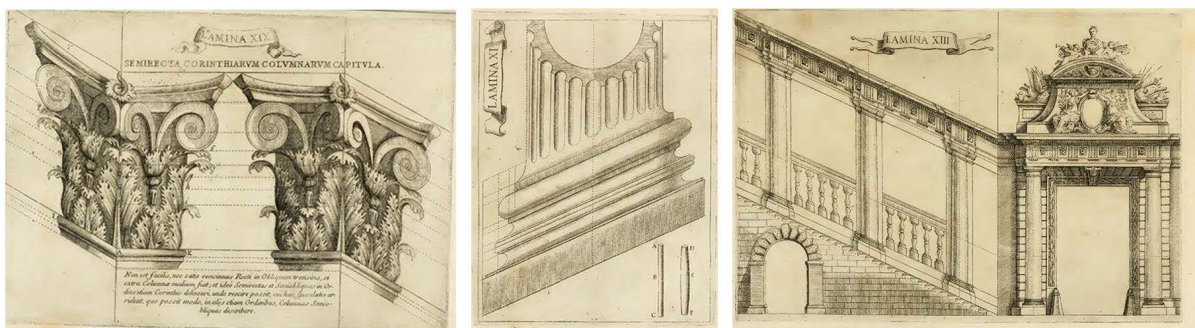

Fig. 2a.

Fig. 2b.

One example is Andrea Pozzo's book on perspective. He was one of the scholars Gilly and most German architects referred to. In Fig. 2a, there are three separate drawing sets from Pozzo's book, which presents a template and two drawing sets, on which we encounter similar illusions that separate the end result as if it is an addition. Interestingly, although there is no drawing, the first plate presents a template that the forthcoming "image" is already separated and pinned on the underlying paper (Fig.2a left). On the second plate, in addition to the pinned paper, another illusion on the second plate presents the materiality of the guidelines to draw a perspective projection of the vertical elements.The lines are drawn as if they were strings used in existing space to understand the perspectival structure (Fig. 2a). The third plate shows the same illusion in a perspectival system (Fig. 2a right). These illusions emphasize the presence of the images rather than the knowledge of design and building. The examples can be expanded since most German architects used these books as lecture books and created their *Lehrbuch* by referring to these inspirations.

In terms of the emphasis on the image, another interesting example is from the seventeenth-century, which is a book on oblique drawing written by a philosopher, J. Caramuel de Lobkowitz. The book gives information on the geometrical construction of the oblique. The interesting point is that the drawings present the renowned images of classical architecture as distorted surfaces within oblique representation system. In Fig. 2b, there are different classical parts; column base, façade detail and column capital, respectively. However, each detail drawing is re-located within the oblique system. Here, we see these classical images are not the components of design but the imagery that helps to illustrate the visual possibilities of the oblique system. Referring to the previous examples, the additional pinned page of the architectural image becomes a mutable surface, not a mutable design component. In Fig. 2b, the images of classical parts are projected to the oblique system. The

immutability of these classical parts reveals an interesting representational condition: the complex geometries become two-dimensional since they are operated only as surfaces to project. Although the intention is not to develop a new design idea, this experiment is an input to the ways of making within Baroque architecture.

Within the second half of the eighteenth-century, a mathematician and architectural theorist Johann Friedrich Penther published four volumes of "*Ausführliche Anweisung zur Bürgerlichen Baukunst* (Detailed Instruction on Civil Architecture)", which includes an art and architecture lexicon, the documentation of residential and public buildings, and orders of columns. Like the previous examples, Penther's work includes "instructions" on architectural drawing and a compilation of immutable images. Detailed documentation of various architectural parts, ornamental patterns and structural relations are categorized and presented within his work. He also uses representational illusions to include certain architectural parts and whole as pinned references. (Fig. 3).
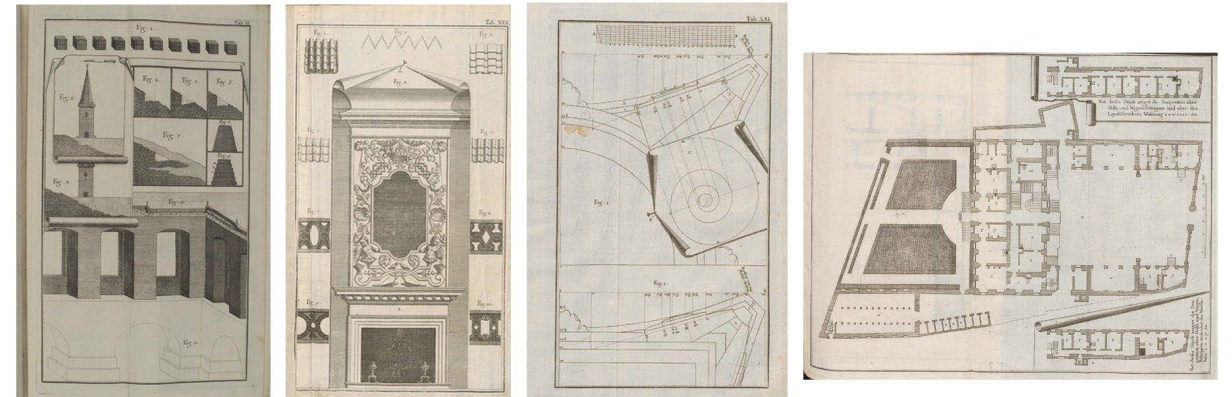
Fig.3.

In this part, a variety of scenographic modes that "pins" architectural images are presented. Without being limited to these examples, these drawings and the act of "pinning" illustrates the representational translation of *Bild* as image.

4.2. *Bild* as form, *iterated* drawings
In contrast to the previous part, "*Bild* as image, pinned", here, instead of "pinning" a variety of examples, the focus will be on Redtenbacher's work. [36] Tracing the concept Heinzerling's *Bildungsgesetze*, which is also used by Redtenbacher, representational translation of these "rules" are presented as the abstract iterated drawings of Redtenbacher.

The heterogeneous ground of architectural knowledge is reflected on the architectural representation and terminology of Bötticher, Semper, Schinkel, and Heinzerling. Related to these scholars' works, Rudolf Redtenbacher's work towards the end of the century can be considered as a transition that learns from these reflections and affects the following century. Redtenbacher also created a "*Vorbilder Sammlung* (Model compilation) for carpenters (*Vorbilder für Bautischler-Arbeiten*) in 1875. Similar to the other model compilations, there is detailed documentation of existing elements from specific locations. However, in this part, the focus will be on Redtenbacher's later works, especially after the 1880s. The terminology in his work and his corresponding drawing technique will be highlighted.

In his book *Tektonik: Principien der künstlerischen Gestaltung der Gebilde und Gefüge von Menschenhand welche den Gebieten der Architektur der Ingenieurfächer und der Kunst-Industrie Angehören,* there are many chapters focusing on various design problems of changing scales of art to architecture. Here, mostly the terms and drawings focusing on architectural form and design will be underlined. In the book, Redtanbacher opens up the term "*Tektonik*" and presents rules and codes that are structured through clear categories in the design process. Each chapter presents different terms and related simple and abstract drawings, which are presented within the continuity of the text (Fig 4a). Fig. 4a shows two pages from two chapters *Aesthetische Principien* and das *Geometrische Element in der Tektonik*. On the first page from the "aesthetic principals" chapter, the squares are drawn and iterated in different positions to represent changing relationships of the same geometries (Fig.4a top left). The other page shows geometrical steps and references of linear division of a surface. The drawings are abstract and the basic lines are iterated to show various configurations of the same linear references.

Especially the chapter *"Die Formgebung"* is particularly noteworthy for its structure and definitions of form. The chapter comprises four parts: A. *Die Form an sich* (The form itself) B. *Ueber das Verhältniss von Form und Zweck* (On the relationship of form and purpose) 0 . *Ueber das Verhältniss von Stoff und Form* (On the relationship of form and material) D. *Symbolische Formen* (Symbolic forms).[37] Each part conveys knowledge on form and related concepts in definite categorizations with rules and codes. The chapter "*Die Formgebung*" presents theoretical and representational knowledge of architectural form – defined within doubles of artform and coreform; both representational and structural. Redtenbacher uses the term "*Bildungsgesetze*" as well, and presents related rules and codes on "form-giving".

In the first paragraph of *die Symbolische Formen* part, it says:

> "We have such forms which do not fulfill a purpose, but which are intended to illustrate the purposes through an *image*, called symbolic forms. They are divided into a) relational forms, b) ornamental forms. However, relational forms that characterize the parts of the structure and joints are 1. forms of limitation, as the beginning and end, core and framework, 2. forms of transition referring to operations of mediation, connection and structure."[38]

Like Heinzerling's separating and relating elements, Redtenbacher defines forms of limitation and transition. Rather than documentation of the existing architectural parts, guiding lines and geometrical references determine multiple solutions despite the "symbolic" purpose. For the forms of limitation, the two pages (Fig. 4a top right) present the rules with two basic drawings. The first is an abstract diagram showing the limits to extend or contract (Fig. 4a). After indicating the options of "ending", the other page shows abstract iterated options of ending in between different geometries. For the forms of transition, two pages present two geometries iterated within a process of geometrical formation (Fig.4a bottom left). Like the abstract drawings of Heinzerling, Redtenbacher also prioritizes the relationship of parts. His drawings present a process of understanding and steps of geometrical formation rather than documentation of the existing form of detail. In the Fig. 4a bottom left, we see multiple drawings for one connection between a prism and a cylinder, showing steps of combinations and transitions of elements. [39] Redtenbacher works with basic geometries and presents sequential diagrams to understand how they develop into complex mediating elements. In the part *Schmuckformen*, which can be considered as the definitional continuation of *Kunstform*-representational form; we see details of surface ornaments. We do not see a detailed ornament drawing; instead, there is an abstract direction diagram to locate lines that create the pattern's geometrical logic (Fig. 4a bottom right).
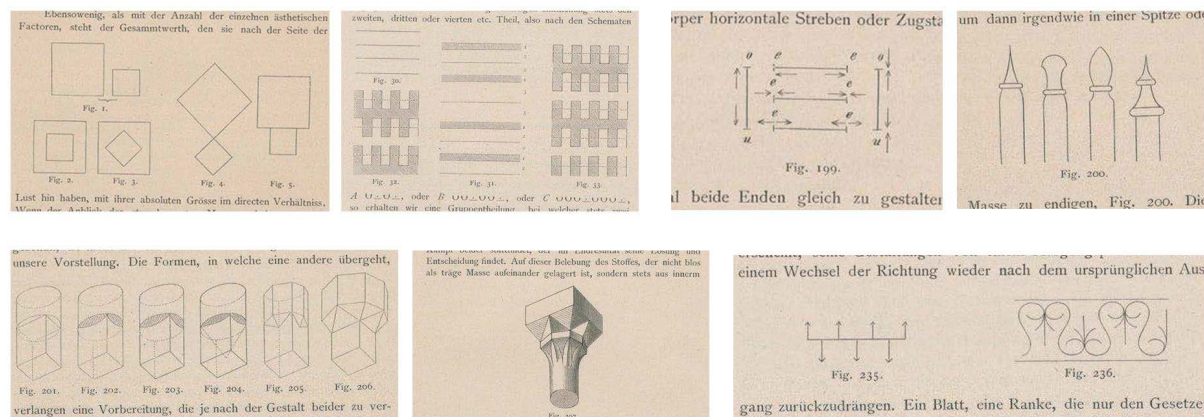
Fig.4a.

In Redtenbacher's other books, which can be a part of a more in-depth study, mathematical options and iterated processes of architectural elements are presented in small, rather abstract diagrams. One example shows the mathematical relations of one corner to a vault with changing cuts of diagonal and orthogonal elements (Fig. 4b).[40] The changing geometries shown are explained in terms of material and spatial needs.

In this part, various abstract drawings, iterated processes of drawings and possibilities of form are presented. Without being limited to these examples, these drawings and act of "iterating" illustrate the representational translation of *Bild* as form.
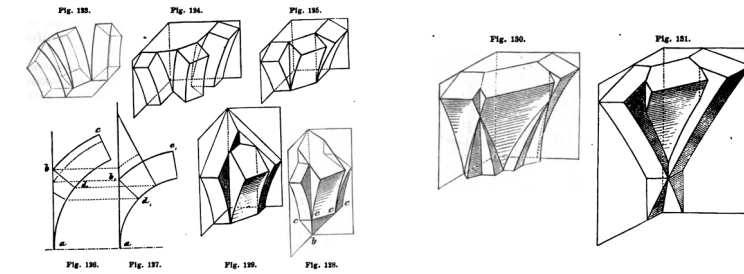
Fig.4b.

5. Concluding Notes

The ongoing doctoral research aims to re-read the development of the last two centuries' architectural knowledge (texts, drawings, buildings) through the etymological relations of words *Bild* and *Bildung*. The intention is to trace *Bild* and *Bildung* as architectural concepts, offer interpretations beyond their etymologies and present a re-reading of the making of architectural knowledge. This text, more specifically, presents a sample of this re-reading reflected on the doubles of image-form and structured in three parts: **"understanding words", "tracing words",** and **"curating words".** Therefore, as a part of broader theoretical research, the paper focuses on several architectural drawings that could make an architectural statement visible.

To conclude, Angelo Poliziano's categorization of "*genera doctrinarum*" (possibilities/ways of knowing) in his "Panepistemon", is a precise reference to mention. According to Poliziano, there are three ways of knowing: the "*Inspiratum*" (inspiration), the "*Inventum*" (invention), and the "*Mixtum*" (mixed).[41] This three-partite definition of knowing can be related to the overall reading that also includes the relevance of *Bildung* in architectural knowledge. In this regard, *inspiratum* and *inventum* can be read parallel to image and form double. Tracing the image-form double within the recent architectural knowledge is a focus of the study that has yet to be elaborated. It is seen that the juxtaposed terms of image and form reflected as shape and formation as well as changing definition of image as a "statistical-electrical" notion within contemporary discourse.[42] Various projections of image and form double such as Robert Somol's distinction between shape and form -especially "shape architecture"-, Aureli's "form-object", Tschumi's diagrams and more recent works such as Office Kovacs's "Archive of Affinities", as well as recent definitions of tectonics, and the hermeneutic cycles that changes the conventional drawing techniques/modes, are also a part of this re-reading to be elaborated in the further steps.[43]

Notes

1 Alexandre Alves. "The German Tradition of Self-Cultivation (Bildung) and Its Historical Meaning." *Educação & Realidade* 44, (2019): 3, DOI:10.1590/2175-623683003

2 Ibid, 3.

3 Ibid, 3.

4 Moses Mendelssohn. Ueber die Frage: was heißt aufklären?, *Berlinische Monatsschrift*, Bd. 4, (1784): 194.

5 Hans-Georg Gadamer. *Truth and Method*, (1977): 12.

6 Alves, "The German Tradition of Self-Cultivation (Bildung) and Its Historical Meaning.", 4.

7 Tomislav Zelić."Bildung and The Historical and Genealogical Critique of Contemporary Culture: Wilhelm Von Humboldt's Neo-Humanistic Theory of Bildung and Nietzsche's Critique of Neo-Humanistic Ideas In Classical Philology and Education." *Educational Philosophy and Theory* 50, no. 6-7 (2018): 662. https://doi.org/10.1080/00131857.2017.1374841

8 Zeynep Çelik Alexander, refers to the definitions of *Bildung* and *Anschauung* in detail in her recent work "Kineasthetic Knowing".

9 Alves, "The German Tradition of Self-Cultivation (Bildung) and Its Historical Meaning.", 5.

10 Barry Bergdoll. "Of Crystals, Cells, and Strata: Natural History and Debates on the Form of A New Architecture In The Nineteenth Century." *Architectural History 50* (2007): 17. http://www.jstor.org/stable/40033846

"… Schinkel had been deeply involved not also with the natural historical researches of Alexander von Humboldt, a close friend, but also with the revival of interest in Goethe's natural historical studies, and in particular Goethe's interests in both crystal formation and in plant morphology, both in terms of the word and concept – which, indeed, were to have a powerful resonance throughout nineteenth-century German architectural theory…"

11 Gadamer, *Truth and Method*, 12.

12 Jean Grondin, and Kathryn Plant. *The Philosophy of Gadamer*. (Routledge, 2014): 24.

13 Mitchell Schwarzer. *German Architectural Theory and the Search for Modern Identity*. (Cambridge: Cambridge University Press, 1995): 262.

14 Adrian Forty. *Words and Buildings: A Vocabulary Of Modern Architecture*. Vol. 268. (London: Thames & Hudson, 2000): 149.

15 Mary McLeod, "Modernism." *Histories of Postwar Architecture*, 2017. https://doi.org/10.6092/issn.2611-0075/6726

"Modern" referring to Mary McLeod's article, in which she explains the various uses of "modern" although it has turned into a more homogeneous concept especially in mid-twentieth-century.

16 Avant-garde ideas are often associated with the twentieth-century. The change, especially after the 1960s, has parallels with the heterogeneity of the initial avant-garde in the nineteenth-century.

17 Here the apparent reference is to Robert Venturi and Denise Scott Brown's works, highlighting scenographic architectural reinterpretations and architectural imagery as tools of critique of the modern.

18 These doubles are traced through multiple sources that refer to the same theoretical network. Acknowledging various academic works adapting the double strands such as "rule and model," "type and model," or "technical and symbolical," the intention here is not to claim image-form double as a new terminological discovery but to define them as a conceptual framework.

19 , Barry Bergdoll. Presentation "Views across the Rhine: Interchanges in French and German architectural thought 1828-1879", March 2014, MAO Slovenia. Accessed from https://www.youtube.com/watch?v=pXcuy9bO7zQ on October, 15, 2021.

20 Harry Francis Mallgrave and E. Ikonomou.*Empathy, Form and Space: Problems in German Aesthetics 1873-1893*, (Getty Center for the History of Art and the Humanities, 1994).

21 Kenneth Frampton. *Introduction to Studies in Tectonic Culture: The Poetics of Construction in Nineteenth and Twentieth-Century Architecture*, (Cambridge and London: MIT Press, 1995); Heinrich Hübsch, Wolfgang Hermann, (trans.), *"In welchem Style sollen wir Bauen?", In What Style Should We Build?: The German Debate on Architectural Style*, (Getty Center for the History of Art and the Humanities, 1992); Harry F. Mallgrave, "Rise of German Theory", *Modern Architectural Theory: A Historical Survey 1673–1968*, (Cambridge: Cambridge University Press, 2009).

Mitchell Schwarzer, "Ontology and Representation in Karl Bötticher's Theory of Tectonics", *Journal of the Society of Architectural Historians 52*, no. 3, (1993): 267-280. https://doi.org/10.2307/990835; Mitchell Schwarzer, *German Architectural Theory and the Search for Modern Identity*, (Cambridge: Cambridge University Press, 1995);

Gottfried Semper, Harry Mallgrave and Wolfgang Hermann. (Trans.), *Four Elements of Architecture and Other Writings*, (Cambridge: Cambridge University Press, 1989).

22 Scott C. Wolf. The Metaphysical Foundations of Schinkel's Tectonics: Eine Spinne im eigenen Netz, Tectonic Unbound: Kernform and Kunstform Revisited *ANY: Architecture New York 14* (1996): 17. http://www.jstor.org/stable/41852137.

23 Heinrich Hübsch. *In welchem Style Sollen wir Bauen?*, (Karlsruhe: Müller, 1828): 13.

24 Barry Bergdoll, "Archaeology vs. History: Heinrich Hübsch's Critique of Neoclassicism and the Beginnings of Historicism in German Architectural Theory." *Oxford Art Journal 7*, (1983): 3. http://www.jstor.org/stable/1360230

For Hübsch, style is "an organically-developed and complete structural system". Bergdoll states that: "Hübsch's pamphlet was anything but an expression of uncertainty. He insisted that only one style could express the needs and aspirations of any society. In defining that style he established an analytical approach to history and a belief that a new style could evolve from the past, which were to be fundamental to later nineteenth- century architectural theories."

25 Schwarzer uses Muthesius' phrase: "*Verstandesarbeit*".

26 In 1893, F. Heinzerling, as rector, gave a speech on "*Die Vermittlungs-Gesetz*" (The Laws of Mediation/Transition) in the *Aula* of the *Kgl. Technischen Hochschule* of Aachen for the birthday of the King. Apart from the "national" and kingdom-related praises, the content of the speech was based on his 1869 article on *Bildungsgesetze*. Digitalarchiv Aachen: Publikationsserver der RWTH Aachen University.

27 Peter Caspar Wilhelm Beuth and Karl F. Schinkel. *Vorbilder für Fabrikanten und Handwerker. Vol. 1-2.* (Getsch, 1821:1837), 61. Public Domain Mark 1.0. https://archive.org/details/bub_gb_cWIXAAAAYAAJ

28 Friedrich Heinzerling. "Die Bildungsgesetze in der Architektural Formen", *Allgemeine Bauzeitung*, (1869): 292.

Parts from Heinzerling's article are translated by the author (corrections by German dictionaries).

29 Ibid, 292.

30 Ibid, 292.

31 Ibid, 292.

32 Ibid, 292.

33 Ibid, 292.

34 Although there is a difference between the level of interpretability, model and type are based on the "image" of the existing parts and wholes. While models (*Vorbilder*) refer to an archaeological documentation of existing fragments, type studies can be regarded as an analytical representation of the existing compositions. In both cases, the knowledge is presented as a compilation (*Zusammenstellung*34) that is a visual lexicon.

35 Christiane Salge. "Visualisierungsstrategien in der Architekturzeichnung um 1800: Friedrich Gilly und sein Entwurf für ein Theater in Stettin" in *Gilly-Weinbrenner-Schinkel-Baukunst auf Papier zwischen Gotik und Klassizismus*, Marion Hilliges,and Christian Scholl (eds.), (Universitätsverlag Göttingen, 2016): 17.

36 Rudolf Redtenbacher born in Zürich. He visited Berliner Bauakademie in 1862 and took courses from Bötticher and Adler. Afterward, he visited Dresden to develop his knowledge on Renaissance art. Following that, he travelled to Wien to study Gothic architecture. Especially three books he published can be emphasized: *Tektonik: Principien der künstlerischen Gestaltung der Gebilde und Gefüge von Menschenhand welche den Gebieten der Architektur der Ingenieurfächer und der Kunst-Industrie Angehören*, 1881, *Architektonik der modernen Baukunst*, 1883, *Ästhetik der modernen Architektur*, 1883.

37 Rudolf Redtenbacher*, Tektonik: Principien der künstlerischen Gestaltung der Gebilde und Gefüge von Menschenhand welche den Gebieten der Architektur der Ingenieurfächer und der Kunst-Industrie angehören*, (Wien: Waldheim, 1881).

38 Ibid, 192. *"Wir haben solche Formen, welche nicht zur Erfüllung eines Zweckes dienen, sondern welche die Zwecke veranschaulichen sollen durch ein Bild, symbolische Formen genannt und sie abgetheilt in a) Beziehungsformen , b) Schmuckformen . Die Beziehungsformen, welche die Theile der Gebilde und Gefüge charakterisieren sind aber 1. Begrenzungsformen als Beginn und Abschluss, Kern und Rahmen, 2. Uebergangsformen zur Vermittlung, Verbindung und Gliederung."* Translated by author (corrections by German dictionaries).

39 Ibid, 200.

40 Rudolf Redtenbacher, *Leitfaden zum Studium der mittelalterlichen Baukunst; Formenlehre der deutschen und französischen Baukunst des romanischen und gothischen Stiles auf Grundlage ihrer historischen Entwickelung*, (Leipzig, T.O. Weigel, 1881).

41 Werder Oechslin. "Reflections on the Ground Rules of Baroque" Mark Jarzombek (trans.), *Thresholds 28*, MIT Press, (2005): 117. http://www.jstor.org/stable/43876213.

Werder Oechslin refers to Poliziano's ways of knowing in his essay "Reflections on the Ground Rules of Baroque".

41 The references are John May's recent discussion on image, photograph and drawing. In addition, Robert Somol's and Hans Tursack's discussions on shape are referred.

41 Possible structure of the ongoing work may be focusing on four acts: thinking, learning, representing, making.

Image Captions

Fig. 1a: Left : *Teil I Abteilung 1, Blatt 1-1a* (Plate 1 and 1a), Right: Table for *Blatt 1-1a* (Plate 1 and 1a)

Sources: Kupferstichkabinett. "33.03-1991: Vorbilder für Fabrikanten und Handwerker. Teil 1, Abteilung 1, Blatt 1: Beispiele architektonischer Elemente antiker Bauwerke (Viertelstab, Rundstab, Hohlkehle, Anlauf, Einziehung, Karnieß oder Rinnleisten, Kehlleisten, Sturzrinnen)" last modified 2021-11-02. Creative Commons Lizenz 3.0, by-nc-sa. https://smb.museum-digital.de/object/90592

Kupferstichkabinett. "33.04-1991: Vorbilder für Fabrikanten und Handwerker. Teil 1, Abteilung 1, Blatt 1a: Konstruktionsdetails der Beispiele architektonischer Elemente antiker Bauwerke" last modified 2021-11-02. Creative Commons Lizenz 3.0, by-nc-sa. https://smb.museum-digital.de/object/90570

Harvard University Collection, Vorbilder für Fabrikanten und Handwerker, Karl Friedrich Schinkel and Peter Wilhelm Beuth, 1821. Public Domain Mark 1.0. https://archive.org/details/bub_gb_cWIXAAAAYAAJ

Fig. 1b: Heinzerling's drawings: *Vermittlungsglied* and *Trennungsglied*.

Source: Bayerische Stadtbibliothek. Die Bildungsgesetze der Formen in der Architektur, Allgemeine Bauzeitung, Friedrich Heinzerling, 1869. CC0 1.0 Universal (CC0 1.0) Public Domain Dedication https://www.digitale-sammlungen.de/view/bsb10479254?page=1

Fig. 2a: Andrea Pozzo's orthographic set drawings.

Source: Heidelberger historische Bestände – digital, Katalog für die Bibliotheken der Universität und Universitätsbibliographie, *Qua porro expeditissima methodus omnia, quae ad architecturam pertinent, optica ratione delineandi exhibetur* . Vol. 2. Perspectiva pictorum atque architectorum. Andrea Pozzo, 1709. Augsburg: Wolff. Public Domain Mark 1.0. https://doi.org/10.11588/diglit.1665

Fig 2b: Oblique drawings, J. Caramuel de Lobkowitz.

Source: Juan Caramuel Lobkowitz, Arquitectura Civil Recta Y Obliqua : Considerada Y Dibuxada En El Templo De Ierusalen ... Promovida a Suma Perfeccion En El Templo Y Palacio De S. Lorenço Cerca De Escurial. Spain: Editorial Maxtor, C2010, 2010. Public Domain in the United States, Google-digitized. https://archive.org/details/architecturacivi00cara/mode/2up

Fig.3: Details from drawings in Penther's books.

Sources: Heidelberger historische Bestände – digital, Katalog für die Bibliotheken der Universität und Universitätsbibliographie, Ausführliche Anleitung zur bürgerlichen Bau-Kunst, (Band 1-2-3-4): (Band 1) Enthaltend ein Lexicon Architectonicum oder Erklärungen der üblichsten Deutschen, Französischen, Italiänischen Kunst-Wörter der Bürgerlichen Bau-Kunst, Augsburg, 1744 ; (Band 2): Worin durch zwantzig Beyspiele gewiesen, wie die Erfindungen von allerhand Wohn-Gebäuden aus Stein und Holtz ... zu machen .., 1745 ; (Band 3): Worin von richtiger Kennung, genauer Einsicht, leichter Zeichnung, und endlich von sicherer Anwendung der Säulen-Ordnungen, und ihren Bey-Stücken, gehandelt wird .., 1746 ; (Band 4) : Worin von publiquen weltlichen Gebäuden, als von Fürstlichen Residenz-Schlössern samt darzu gehörigen Neben-Gebäuden ... gehandelt .., Johann Friedrich Penther, 1748, Augsburg, Public Domain Mark 1.0. https://doi.org/10.11588/diglit.1859

Fig.4a: Details from drawings in Redtenbacher's book.

Source: Redtenbacher, Rudolf. Tektonik: Principien der künstlerischen Gestaltung der Gebilde und Gefüge von Menschenhand welche den Gebieten der Architektur der Ingenieurfächer und der Kunst-Industrie angehören, Wien: Waldheim, 1881. Sources: ETH-Bibliothek Zürich, A 5009 Public Domain Mark https://doi.org/10.3931/e-rara-11789 /

Fig. 4b: Details from drawings in Redtenbacher's book.

Source: Harvard University Collection, Leitfaden zum Studium der mittelalterlichen Baukunst; Formenlehre der deutschen und französischen Baukunst des romanischen und gothischen Stiles auf Grundlage ihrer historischen Entwickelung, Leipzig, T.O. Weigel, Rudolf Redtenbacher, 1881, Public Domain Mark 1.0, https://archive.org/details/leitfadenzumstu00redtgoog

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Biography

Sezin Sarıca graduated from the METU Faculty of Architecture with the second-best degree and received her M.Arch degree from METU. Currently, she is a Ph.D. candidate and a research assistant at METU. Within the research project "Getty Foundation – Keeping It Modern", she worked in the curatorial team of the "Archive Exhibitions" that was on display in METU and TUDelft. In the previous years, she worked as a co-coordinator of drawing and design workshops "Curcuna", "Ankara: Disguised Landscapes" and "Atölye Yığın". She has participated in (inter)national conferences and published on several online architectural platforms and JoLA. She has also participated in DocTalks and EAHN Editorial Workshop for Young Scholars. Her master thesis focused on display environments and relief as an art medium and space definer. Her current research interests include the interaction of art and architecture, nineteenth-century German architectural theory, architectural image and form, and the concept of *Bildung*. She will be a visiting researcher at Karlsruhe Institute of Technology – Program in Architectural Theory in October 2023.

Space, Makan, Kūkan
Phenomenology of Space through Etymology

Sayed Ahmad, Mohammad[1]; Hweidi, Munia[2]

1. Tohoku University, Department of Architecture and Building Science, Sendai, Japan, mohammad.jehad.mahmoud.sayed.ahmad.p1@dc.tohoku.ac.jp
2. Sophia University, Faculty of Global Studies, Tokyo, Japan, mhweidi@sophia.ac.jp

Abstract

This paper explores the perception of architectural space through etymology, focusing on how languages and culture shape our cognition of space. It examines the semantic nuances of space in three cultures: Roman architecture with its relation to Latin and Greek, Islamic architecture and its roots in Arabic, and Japanese architecture via the kanji combination used to express space.

The study tackles the dominance of the Western school of thought in understanding space and gives an alternative approach to analyse spatial phenomena. Also, it provides insight into the unique ways spatial concepts are understood and how distinctive words can reveal much about a society's beliefs regarding architecture.

The comparison is based on the linguistic, geo-cultural, and philosophical origins of space in each of the mentioned cultures. It later extends the comparison to the etymology of architectural terms within the cultures, which supports how space is conceived within each language. Also, the concepts brought as reading keys are culturally conceived and translated.

The results suggest that Roman space (*Spatium*) is an interior space and derives its essence through physical objects. Islamic space (*Makan*) is dependent on actions inside the region and confined by the forces of the desert. Japanese space (*Kūkan*) is centred around the appreciation of time, which makes it temporal and merged with nature.

In Western philosophical thought, *Spatium* is existentialist, *Makan* is similar to some structuralist thoughts of interiorisation of space, and *Kūkan* is nihilist. From an Islamic philosophical perspective, *Spatium* is *Donyawi* (materialistic and hedonistic), *Makan* is *Bateni* (introverted) toward *Nafs* (soul), and *Kūkan* is *Zandaqa* (Islamic rejected pantheism). In Japanese philosophy, *Spatium* undermines the importance of time as a facilitator of space, *Kūkan* revolves around the concept of *Ma*, and *Makan* does not consider the intangible as a part of *Makan* but rather outside of it.

Key words: socio-spatial dialect, Roman architecture, Islamic architecture, Japanese architecture, comparative cultural studies.

1. Introduction
Space is the protagonist of architecture, and it stems from culture and language. Considering the dialectical relationship between objects, as conceived by scholars such as Strauss[1] and Lotman, space is perceived by cultures depending on the individual relationship and their interaction with the environment. The physical limitation of an individual existing within the environment leads to the act of demarcation of elements of the surrounding space through creative means such as architecture.

There is a universality of specific cultures and geographical details shaping the individual and, therefore, how they inscribe their identities into the depiction of space. However, the current literature is dominated by the Western philosophical approach to space, which makes the proximities, differences, and geo-cultural nuances rarely discussed. In the architectural literature, Soja discussed the influence of geography and social structure on the socio-spatial dialect of cities and architecture. Schulz investigated the genius loci of cities and buildings depending on Heidegger's philosophy. Zevi presented the dilemma of comprehending and visualising architectural space. In cultural studies literature, Thacker and Ingram used multiple theories including Heidegger's to discuss the implications and connections between culture and space. They focused on how language, culture, and identity inform our understanding of space. Similarly, Thornbury and Maeda studied the emergence of space as the subject of cultural analysis regarding its original culture and language as well as a Westernised modernised landscape. Fouad and Elmusa tackled the manifestation of the desert as a space of both physical significance and metaphysical within a cultural frame of language and identity. These discussions within comparative studies are skewed towards an East/West comparison.

This paper will add to the global dialogue about space by shifting the fulcrum of the usual comparative view of East/West, creating "asymmetry" as called for by scholar Miyoshi by shifting the locus of comparison through the expansion of the comparison to a West/Middle East/East scope towards an expansive global dialogue regarding the treatment of space beyond the usual dichotomy. It will focus on understanding space through etymology and within a geo-cultural context in architecture. By contextualising each of the readings within the school of thought of the culture of origin, the research will investigate how language affects space's phenomenology and vice versa, and how space is conceived geo-culturally and why. This study will provide insight into the unique ways spatial concepts are understood within a cultural context, as well as an appreciation for how distinctive words can reveal much about a society's values, history, cosmology, and beliefs regarding architecture.

The paper is divided into six sections, starting with this introduction. The following three sections present a literature review of the etymology, philosophy, geo-culture, and cosmology of space in Roman, Islamic, and Japanese cultures. These sections also present the significant characteristics of each culture's space within its own understanding. Section five compares the three cultures, emphasising the phenomenological differences. It also relates the concept of space to architectural terms used in each culture and the spatial formation of its architecture. Furthermore, it discusses the affinity and contradiction of space among the cultures. The last section concludes the research results and presents a future initiative.

2. Of *Spatium*
Space in the Oxford English Dictionary has 19 definitions that denote time, area, or attributive and in combination. These definitions capture the everyday understanding of the concept while also highlighting the intricacy of the idea and hinting at historical debates that continue to this day. Etymologically, space is an adaptation of the Old French *espace*, which is an adaptation of the Latin *Spatium*. Some linguistic resources suggest a relation between the Latin *Spatium* (area or extension) and the Greek *Stadion* (measurement unit). However, there is a difference in the conceptualisation of the word, as *Stadion* conveyed by the root 'sta' implies a static meaning, and *Spatium* conveyed by the root 'spa' implies a dynamic meaning. The Greeks used *Chora* (space) and *Topos* (place) to describe spatial phenomena. However, *Chora* is not a literal translation of *Spatium* but a less abstract concept of it[2]. Space also witnessed a change in definition in the late 19th century. This change is rather philological than etymological. The conceptualisation of space was influenced by German literature about *Raum* (space) and *Raumgestaltung* (spatial formation). This shift changed space into a relational element, which is the modern school of thought about space.

Historically, Sigfried Giedion identified three stages in how space was perceived in the history of Western architecture. In the first stage, as seen in ancient Greece, space in architecture was made through the interplay of volumes, with less regard for interior space. In the second stage, which began in the middle of the Roman period, space in architecture was equal to the hollowed-out space of the interior. The third stage began at the beginning of the twentieth century with the abolition of the single view of perspective, which crystallised later into relativity. This classification is parallel to the etymological description mentioned earlier of Greek's *Topos* and *Chora*, Latin's *Spatium*, and German's *Raum*. Therefore, associating space in its modern epistemology with an old term would lead to anachronism and methodological inconsistency. However, from a semantic point of view, the Latin term *Spatium* was open enough to accept within itself more complex meanings and connotations, which made the word space dominantly used to describe these wide ranges of phenomena.

We can classify these three stages of Western space with the Greek as an architecture of place, the Roman as an architecture of interior space, and modernism as an architecture of relativity. This section will focus on Roman space, or *Spatium*, for two reasons. First, Roman architecture concretised the Western world's critical cultural and social changes. Second, for comparison purposes with the other proposed languages, Roman architecture would be historically appropriate. At the time of Vitruvius, *Spatium* was mainly understood as a simple (linear) extension, a temporal extension, and a two-dimensional notion to define a region. Nevertheless, this does not mean the early Roman period had no cognition of reality in its three dimensions. However, their ideas were not communicated as our current understanding of space. In the middle Roman period, architectural space was conceptualised in its three dimensions.

The application of ordering rules, such as *Taxis*, made *Spatium* have identifying characteristics that are correlated to the semantics of *Spatium*. Roman architecture is usually organised on a strict (linear) axial basis that creates symmetry within the form. This axiality emphasises the linear extension of space and, later on, the emphasis on the one-way perspective of interior spaces. Also, the interior spaces were highly ornamented and sought perfection. A second attribute is its extensive and varied use of interior space, in contrast to its predecessor plastic architecture of classical Greece. *Spatium* becomes defined by walls and columns, which are intended to define a hollowed volume rather than masses. This appreciation of walls and columns is rooted in the cosmological understanding of the world and anthropomorphism. A third feature of Roman architecture is related to psychophysical isomorphism. The natural properties are reflected in the built spaces as an attempt to equate natural places with the built place. This isomorphism is represented by the importance of light coming from above, similar to the sky, and the expression of the world as oriented and round (the rotunda)[3].

Spatium main characteristics are axiality and symmetry, dependency on linear extension of interior spaces and appreciation of singular elements that define the space, such as walls and columns. The user in Roman architecture is attracted to the walls and columns, and light comes from above. The architecture resembles the natural habitat and anthropomorphism. *Spatium* is a three-dimensional hollowed volume defined by materialistic elements. Its phenomenology becomes an understanding *of* what makes space in the dimensions of length, width, and height. The *of* elements, *of* mass, and *of* space become the locus of attention in Western space. This approach is an existentialist view of space as it sees space as important through existence, which precedes essence.

3. In *Makan*
There is a feature in the Arabic language that is unique compared to other languages, making the approach to the etymological study of concepts different. Standard Arabic language, to a certain extent, was preserved for 1400 years, and the semantics and syntax of the language were kept intact. Hence, it became an influencer for other languages rather than influenced. Opposite to English, which was influenced by Latin, and Japanese, which was influenced by Chinese, most of the Arabic etymology and philology depend on the roots within the context of the language itself. For these purposes, when the term Islamic architecture is mentioned, it is implicitly (sometimes falsely) correlated with the Arab region, although its geographic location might be outside of it.

Faragh is translated to space; according to *Lisan Al-Arab*, the word literally means a place of emptiness. This word is a neologism with some contradicting implicit meanings. The semantics of the word denote the meaning of the impossibility of existing inside the space since if anything goes into *Faragh*, it becomes not empty anymore. The word was never used in pre-Islamic or early Islamic literature to describe an element with the attribute of location. Similar to *Raum* and space, *Faragh*, in modern literature, was influenced by German and Russian philosophies. On the other hand, the word *Makan* was historically used to describe spatial phenomena. *Makan* is translated to place, but this translation is deficient. Place usually implies a non-abstract concept, and space is an abstract concept; however, *Makan* is abstract. *Makan* comes from the root *Kan*, which means existed. *Makan* is the name of place of the root *Kan* or the name of time of the root *Kan*[4]. The word is usually used to describe the name of place of the word *Kan*, but in multiple cases, in the literature of the Quran and poetry, *Makan* is used to describe time. Native Arabic speakers can differentiate its usage based on context. However, in some literary sources, the word is left vague and open for hermeneutics to add

eloquence to the text. Hence, *Makan* can be translated to the loci of existing objects or actions, the time of existing objects or actions, or both inexplicitly combined.

Geography was the nucleus of this abstract conception of *Makan*. Salah Salih described the desert as a place with specific geographic details that inform its inhabitants, who in turn inscribe their identities and values on the landscape. Arabic was born in the desert, a vast space that both represents the interior space of the mind and the exterior place of dwelling. It is in this intertextual space that the Arabs dominate by their mere existence. This was reflected architecturally through the building of the first mosque, where the prophet ordered his companions to lay out rocks to create a perimeter for the prayers. Also, the prophet said, "Wherever you pray, that place [*Makan*] is a mosque". This dictates that the physical objects that define space are unnecessary, as much as the people doing the acts of praying or the action itself in the space. Also, the word for mosque, *Masjid*, means the place to prostrate oneself, which describes the action inside the space. In this vein, the desert space aids in the concept of decentralising the self to allow it to recenter itself within the vast nothingness of the desert space and become part of a universal community. This supports the communal sense of religious community. Another purpose of the mosque is revealed when considering that the colloquial Arabic for mosque is *Jame' (*to congregate)[5].

Fig. 1

Another source of abstract conceptualisation of *Makan* occurred through Sufism, which had a major interest in space. Nader Ardalan[6] described how Sufism saw God through unity of existence or a modified version of pantheism to fit within Islam. Sufism identified people through *Jasad* (body), *Aqel* (mind), *Nafs* (soul), and *Rouh* (spirit). The body and mind exist in the realm of the world, and the spirit exists in the realm of heaven. *Nafs*, on the other hand, exists between the two and depends on the piety of the worshipper. If the person is hedonistic, their *Nafs* will move closer to the natural world, and if they are ascetic, the *Nafs* will move closer to the realm of heaven or God. Although *Nafs* is translated into soul, it actually means the interior of the mind or the driver of thoughts through emotions or beliefs. It is a layer deeper than the mind's rationale but drives the mind to do actions. Sufism understood space as a juxtaposition of body, mind, and *Nafs,* and it is intended to move the *Nafs* closer to the realm of God.

Therefore, spatial design within this period started abolishing any slight hint of anthropomorphism, and the focus was on the Islamic patterns or the surfaces rather than the columns or walls. Again, the vast, harsh open space of the desert challenges a sense of reality that creates a surface connecting place, memory, and human identity. Surfaces contain within themselves a *Makan,* as each dimension possesses a distinct purpose and symbolises a particular metaphysical concept. Light also came as a surface through a patterned opening and through the courtyard[7]. Spatial planning was introverted to express asceticism from the exterior and beauty from the inside, as the mosque is a house of God, the source of all beauty.

Makan stemmed from the abstract image of the desert, which is characterised by the appreciation of the action happening inside it. The etymology suggests an understanding of place and time separately and combined, emphasising the people's actions inside it. The desert is seen as a space that moulds its inhabitants and exists within many iterations, including the physical space, the existential space

that fuels identity, self, cultural imagination, and tradition, or the natural space, which exists independent of human annotation and denotation. Cosmologically, *Makan* affects the *Nafs,* and its object is to elevate *Nafs* into the realm of spirits. Spatially, it is introverted, based on surfaces, and intertwined together. Space in Islamic architecture is fundamentally understood through what is happening *in* space rather than *of* space. The phenomenology is also occurring *in* the *Nafs*, rather than *of* mind or *of* body. Islamic philosophy sees space as a *Bateni* (introverted) phenomenon. Hence, *Makan* is defined by XY and a constructed image *inside* the mind and of action and experience. The third dimension is interiorised rather than materialistic.

4. Within *Kūkan*
The word *Kūkan*, which translates to an interval of space, was introduced in the 1880s to describe the Western concept of space and has often been cited as evidence to suggest that Western space and *Ma* were fundamentally different. According to *Nihon Kokugo Daijiten*, *Kūkan* comes from two kanji characters, *Kū* (void) and *Kan* (interval or time). The second part of the word (*Kan*) has another reading, *Ma*, from which we can derive the etymology of space in Japanese literature. *Ma* was used as a suffix for different words to describe Japanese rooms, which were conceived as intervals. Roland Barthes argued about the relationship between myth and temporal meanings in traditional Japanese architecture through the analysis of the linguistics of *Ma*. Arata Isozaki defined *Ma* as "an empty place where various phenomena appear, pass by, and disappear." Isozaki also wrote articles about Japan-ness in architecture; the book's name in Japanese is translated to "the thing" in Japanese architecture. The notion of "the thing" is similar to Heidegger's philosophical investigation of life's paraphernalia published in 1951. Metabolist architect Kikutake expanded on the etymology of ideas and space through *Ka* (hypothesis), *Kata* (form), and *Katachi* (shape). The epistemology of the physicist Mitsu Taketani inspired Kikutake and resulted in a turn from Western epistemological concepts such as Plato's theory of poiesis[8].

Mitsuo Inoue documented the evolution and features of Japanese space. The expression of time in space was not only confined by architectural space but also through art. Japanese art deduces the masses into isometric forms with events happening between them. Also, it omits unnecessary details unrelated to events from the drawing. The omission happens through natural elements, such as trees or clouds. This enclosure of time within nature is the second spatial feature of Japanese architecture. There is no delineation between time and nature; they are seen as expressions of time and space. Therefore, ancient Japanese texts included nature-based poetry since nature was seen as a part of the chronotope, not apart from it. As Fumihiko Maki describes, the shrine in Japan is not iconic by itself or detached from nature, but it is an extension of nature. This is rooted in Japanese cosmology, as the Japanese sought symbols and divine images in all forms of nature; hence, the shrine must be part of nature and not on top of it or louder than it.

Fig. 2

The third spatial feature of Japanese space is horizontality[9]. The floor in Japanese space is the most important, as the user is attracted to the floor where more events occur. Also, light comes from the reflection of light from the floor. Darkness in Japanese architecture is symbolic, and light comes indirectly through the reflection of the *Tatami* (traditional Japanese flooring). Horizontality is also expressed in the exterior spaces. The buildings in Japan are surrounded by a wall called *Kairo*. It was not simply an entrance but a place of mediation between spaces and a node between two spaces. This node is entirely horizontal and derives its spatial quality from a stop in time. The worshippers approach the gate, stop, pray, and enter, although nothing physical is preventing them from continuing walking except a spatial transition that creates a stop in time. A similar phenomenon also occurs in *Himorogi*, which is a simple form of a sacred space in Shinto. *Himorogi* translates into a place of purity or a fence for gods. The *Himorogi* depends on the presence of invisible spirits known as *Kami*, and

their arrival and departure are signified through the events of movements of leaves of a sacred branch in the centre. The *Himorogi* is an overtly temporary space, and its structure is not sacred, but the invisible events within it are what is sacred[10].

The forms of horizontality are also linked to the importance of pillars. In Japanese mythology[11], the pillars resembled a connection to heaven and were used to count human beings and later extended to apply to gods. The strong anthropomorphism of the gods of ancient Japan makes this quite conceivable. The pagoda is an extension of the idea of a freestanding pillar. The first Buddhist tower in Japan, built by Soga no Umako, is said to have been a single wood pillar (*Satchū*). There are no clear-cut distinctions among gods, humans, beings, and objects, as evidenced by texts such as the *Nihon Shoki*[12], which begins from the creation myths as part of history. This pantheistic worldview was the philosophical foundation of forming space. Later, Pure Land Buddhism influenced the architecture of Japan and led to the frontal pictorial type of formal composition. The pictorial form developed spatially into movement-oriented architectural spaces similar to a bead layout with extrusions in roofs and forms. This progressive fragmentation of space led to a scattered spatial layout.

Kūkan is based on the idea of emptiness and nothingness, which was influenced through the cosmological doctrine essentially by Shinto and later by Buddhism. This was expressed architecturally through the temporality of the space, the darkness in spaces through the reflection of light from the *Tatami*, and the pillar as invisible gods holding the roof. Also, the gate is a mental and spiritual transition between realities. This worldview made Japanese architecture not fascinated by the ornamentation of interior space but by focusing on time *within* space. Hence, the concept of *Ma* was the core phenomenological basis of *Kūkan*, as time is the driver of space. Japanese philosophy sees the three-dimensionality of space as not occurring in the mass (or XYZ) but in XY and time since time has more value than Z, and the experience happens *within Kūkan*.

5. Among the *of*, *in*, and *within*
This section will delve into a comparative analysis of space among Roman, Islamic, and Japanese architecture within the schools of thought and contexts of their cultures and languages of origin. In this way, the comparative fulcrum does not skew towards the paradigm of a dominant against which the other is weighed, but rather an analysis of how each is presented within their spheres of origins, bridging the gap between cultures that are rarely held in dialogue.

Space in the three cultures originated from the definition of space as an enclosure of a two-dimensional region. *Spatium* sought this enclosure with a physical and visual barrier. Hence, the dividing objects of walls and columns became central in the creation of *Spatium*. Also, it became a natural progression to fully enclose this two-dimensional region with a physical ceiling, which made space an interior three-dimensional entity in XYZ. In *Spatium*, the ceiling became an extension of the walls and columns, a continuous cave built within the city. This was reflected within the city context of the iconism of buildings within the city. The buildings became on top of nature and challenged its context. The Roman space developed a sense of perspective to understand space. The importance of the Z axis in the interior space was emphasised through light, as light comes from the top of the space.

Makan takes the notion of region enclosure into the existence of action within this region. *Makan* is an organic, biomorphic shape with interiorised spaces dependent on action or the assembly of actions. Therefore, *Makan* will have stationary spaces within this undefined open region resembling an open desert. Moving from the stationary spaces will take the user among in-between spaces. *Makan*'s three-dimensionality comes from the XY and the interiorization[13] of this region or action within the area. There is a synonymity between the action and the region in *Makan*; without the region, the action cannot exist, and vice versa. In *Makan*, neither the physical building nor the physical existence of people matters, as the desert is a stronger and harsher landscape that devours everything. Jasper[14] describes the desert as an interior space of the mind and an archetype of the imagination. Therefore, the building does not challenge the desert and almost does not exist, but assimilates into its existence and defines its sub-regions through action. Also, light comes from the surfaces, penetrating and dominating the space rather than emphasising its existence.

Kūkan sees regions as independent instances connected through time. The regions, in a different sense, can be seen as memories; when a person exits a space, they go from a memory to a future memory, making continuous movement through time[15]. *Kūkan's dependency on regions within time* makes time the third dimension of *Kūkan* (or the first dimension before XY). This unseen nothingness is symbolic in *Kūkan* more than the existence of volumes such as *Spatium*. Hence, darkness has a deeper meaning in space than light, which makes light exist as a secondary reflection element through

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the floor. Tectonically, Japanese space is appreciated through the flooring, where most events happen and people are attracted.

The concept of time in Western space came as a fourth dimension and was related to theories of relativity. It is also related to the conceptualisation of space through *Raum* rather than *Spatium*. Time in Western space comes as a supplementary layer of relations of interiorised space. It is an advancement upon the three-dimensionality of interior space and its configuration, or XYZ and t. Japanese architecture sees time as the essence of the definition of the regions of space or tXY and Z. This led to an intellectual affinity among multiple modern movements between Japan and the West, such as Le Corbusier and Kenzo Tange or structuralism and metabolism. *Makan* collided with Western philosophy and became a spatial centaur that lost its identity and was portrayed in Arabic prose as a cause for insanity[16]. A similar collision happened in a different sense in Japan during the Meiji era, which resulted in new types of cities and architecture and caused societal anxiety[17].
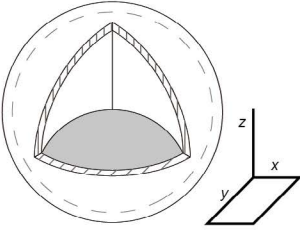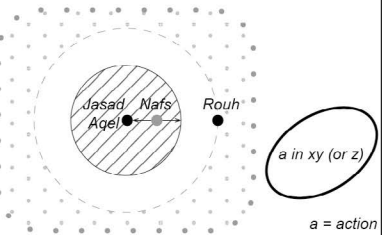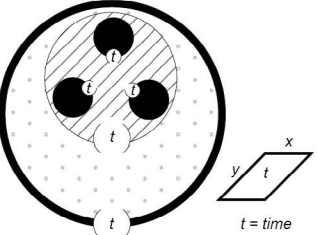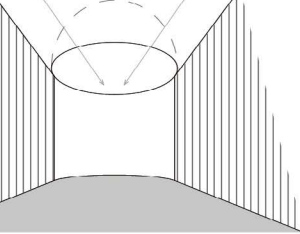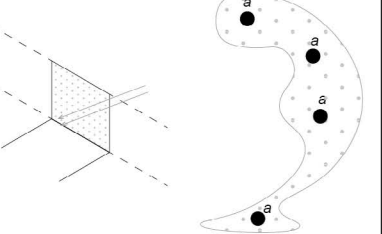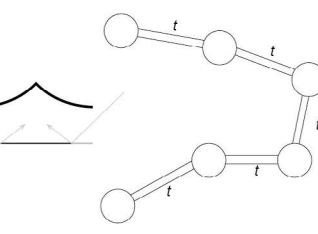
	Spatium	Makan	Kūkan
Dimensions		*Jasad Nafs Aqel* *Rouh* a in xy (or z) a = action	t = time
Experience		a a a a	t t t t
Summary	Spatium exists in XYZ. Interior space is based on vision, *of* movement, and *of* material. Light comes from the top. The user is attracted to the walls and columns.	Makan exists thorugh actions *in* surfaces and through Nafs. It is stationary and the space in between becomes morphic. Light comes from the surfaces, and the user is attracted to it.	Space exists in time *within* XY. Space is based on nothingness and the transitions *within* are essential. Light is reflected from the floor, and the user is attracted to it.

Fig. 3

Extending the etymological analysis to architectural terms in each of the cultures, we can elicit the different approaches to understanding the tectonics of architecture. One of the most important features of Roman architecture, and Greek before it, is the orders. The orders of columns were given names, such as the Corinthian, which is related to the Greek city-state of Corinth. This shows the importance of the element of columns. On the other side, Islamic architecture focused on naming patterns and Islamic arches, which were given names based on their function. For example, the *Makhmoos* is the Islamic pointed arch, and it translates into the element based on fives since its proportion is divided into five equal pieces. Japanese architectural orders are based on the design of the roof, which was seen as a floating object. One of the most famous Japanese gabled roof orders is called *kirizuma-zukuri*, which was originally named *Maya*, which means the true roof or, implicitly, the true realm. This etymology suggests the transcendence between the real and the memory.

The spatial formation of the three cultures is also rooted in the etymological roots. The Pantheon, which is the most celebrated rotunda, is based on axiality, focality of the dome, and detailing of the interior. The word Pantheon meant most holy, or the [house] of all gods, which was represented in the sculptures on the walls. The Pantheon is similar to a cave within the city, with its deep entrance and light penetrating the dome. This natural inclination also extends to domestic architecture. The *Domus*, which is a house in Greek and later borrowed by Latin, was a residence for the upper class and has been traditionally presented as a bucolic idyll, where all you do is serve the *Phusis* (the natural order) and place yourself at the service of its urge.

Islamic architecture, religious and domestic, is centred around a courtyard. The courtyard is described in the literature as a means of *Taqwa*, an Islamic moral which means to protect and preserve oneself. The hierarchy of spatial formation from public to private spaces in the planning and experience of Islamic architecture conveys this sense of covering, concealing and sequential revealing. At the same time, the courtyard is outside the building but inside the perimeter of the property. In many cases, such as in the Umayyad mosque, the orientation of the movement is right to left, but the praying orientation is top to bottom. This combination distorts the axiality and makes it ambiguous, similar to a desert. In Arabic, the word for dwelling is *Maskan*, which means a place for practising calmness and is linked to security and comfort; this states the function of a house in the Arabian mindset[18]. Moreover, Islamic patterns followed their internal logic as if they were a cloak draped over the body of the building, often ignoring breaks and junctions in the underlying surfaces and volumes. The "clothing" of wall surfaces, as the poet Ibn Zamrak described Alhambra palace, was seen as a layer to cover and protect the *Makan*, not only for the purposes of beauty[19].

Japanese religious architecture, such as Ise Shrine, has a composition of multiple spaces inside each other, with each transitional gate with its unique name. The *Sai-mon* (purification gate) has purification pools to signify a transition and purification into the altered space. With each gate the prayers pass, they move closer to the realm of spirits, and reality becomes a memory. Also, the shrine itself is hugged by nature, and today, visitors cannot enter the building itself or take pictures. The movement in time is what makes Ise Shrine's space rather than entering and sensing the interior physical space. Another aspect of the temporality of the buildings of the shrine is that every 20 years, the shrine is torn down by locals to rebuild a new one on the other side. This temporal approach is a layer of emphasis on the time in the creation of space rather than the physicality of the space. The shrine exists in a unique state of being a space that is always both new and ancient. This is seen as part of the Japanese belief of *wabi-sabi,* where nothing is finished, nothing is permanent, and nothing is perfect. In domestic architecture, *Kaoku,* which is usually translated into house, consists of two words, home and roof, which shows the importance of the roof in the conception of dwellings. The roof and gate are a depiction of the transition from one realm into another.

6. Conclusion

This research presented a comparative etymological and geo-cultural analysis of space among Roman, Islamic, and Japanese architecture. The research concluded with the importance of the physical interior approach of *Spatium*, the importance of action within an infinite undefined region of *Makan*, and the existence of time within a region in *Kūkan*. Also, *Spatium* challenges nature, *Makan* is confined in nature, and *Kūkan* merges with nature. In Western philosophical thought, *Spatium* is existentialist, *Makan* is similar to some structuralist thoughts, and *Kūkan* is nihilist. From an Islamic philosophical perspective, *Spatium* is *Donyawi* (materialistic and hedonistic) and pushes the *Nafs* to the physical world rather than the spiritual world, *Makan* is *Bateni* (introverted) toward *Nafs,* and *Kūkan* is *Zandaqa* (Islamic rejected pantheism) and equates man and gods, which defies the purpose of space as means for man to reach a monotheistic God. In Japanese philosophy, *Spatium* undermines the importance of time as a facilitator of space, *Makan* does not consider the spirits as a part of *Makan* but rather outside of it, and *Kūkan* revolves around the concept of *Ma*.

The research gave insights into the conceptualisation of space in relation to etymology, geography, culture, and cosmology. A future initiative of this research would be to highlight the contemporary spatial intricacies of space among multiple cultures regarding post-colonialism and globalism, expanding the scope of research beyond the East/West paradigm towards a broader global dialogue.

Notes

1. Pierre Miranda offers a comprehensive review of Strauss' structuralism in addition to other theorists within the scope of cultural anthropology and structuralism. Pierre Maranda. "Structuralism in Cultural Anthropology," *Annual Review of Anthropology* 1 (1972): 329–48, http://www.jstor.org/stable/2949247.
2. Heidegger explicitly said that the Greeks had no word for space. *Chōra* means neither place nor space but what is taken up and occupied by and what stands there. Martin Heidegger, *Introduction to Metaphysics* (London, Yale University Press, 2000), 69.
3. The mentioned characteristics are extracted from the following sources: Christian Norberg-Schulz, *Meaning in Western Architecture* (New York: Rizzoli, 1980) 42-57. Alexander Tzonis and Liane Lefaivre, *Classical Architecture: The Poetics of Order* (Cambridge, MA: MIT Press, 1986), 9-18.
4. The Arabic language is based on roots and derived nouns or verbs that follow the basis of the root. A name of place is a derived noun that indicates this attribute. For example, "to eat" means *akal,* and a place to eat in is *Ma'kal*. Through changing the structure of the word, it gives another meaning. Hence, *Makan* means the place where people exist or the time people exist.
5. Robert Hillenbrand, *Islamic Architecture: Form, Function, and Meaning* (Edinburgh: Edinburgh University Press, 2000), 42-44.
6. The following source was also used to support Ardalan's arguments: Samer Akkach, *Cosmology and Architecture in Premodern Islam: An Architectural Reading of Mystical Ideas* (New York: State University of New York Press, 2012).
7. Light coming from domes was introduced later in Islamic architecture and influenced by Western architecture. This is evident as early mosques' domes were small and non-focal in spatial design.
8. This information is also mentioned in Isozaki, *Japan-Ness in Architecture*, 65.
9. Chen-Yu Chiu, Philip Goad, Peter Myers, and Nur Yıldız Kılınçerm, "Jørn Utzon's Synthesis of Chinese and Japanese Architecture in the Design for Bagsværd Church," *Architectural Research Quarterly* 22, no. 4 (February 2019): 1-22, https://doi.org/10.1017/S1359135518000696.
10. Kevin Nute, "Time in the Traditional Japanese Room," *The International Journal of Architectonic, Spatial, and Environmental Design* 16, no. 2 (October 2021): 15-24, https://doi.org/10.18848/2325-1662/CGP/v16i02/15-24.
11. A well-known Japanese myth of how Izanagi no Mikota and Izanami no Mikota, primal male and female deities, circled the Pillar of Heaven (Ame no Mihashira) and created the land of Yamato. Inoue, *Space in Japanese Architecture*, 7-8.
12. *Nihon Shoki* was written in 720 and is often referred to as *The Chronicles of Japan*, which is the second oldest Japanese historical text.
13. The notion of interiorisation in *Makan* was foreign to Western philosophy until the 1960s, which was introduced by Aldo van Eyck. The word interiorisation of space was confusing to many Western thinkers, and van Eyck depended on the Dutch word *Gemoed*. Although he translated it to mind, its semantics dictate the interior of the mind, similar to *Nafs*. Van Eyck's conceptualisation of interiorisation and in-between space came after his trips to Africa, namely Algeria and the Dogon village in Mali, where both are Muslim-dominant countries, and Algeria is an Arabic-speaking country. This similarity between van Eyck's in-between and interiorisation with Islamic *Makan* suggests further proof of his inspiration.
14. Jasper describes, "The desert is seen as a complex locus of experience and reflection; it is simultaneously an interior space of the mind; an exterior place where pilgrims, adventurers, and travellers can visit and dwell; and an intertextual space produced by cross-references among cultural creations dealing with the desert as archetype or icon of the imagination." David Jasper, *The Sacred Desert: Religion, Literature, Art, and Culture* (Oxford, Blackwell Publishing, 2006), xii.
15. An example of this transcendence from reality into memory occurs in the Noh theatre in Japan, where the performers walk across a bridge (hashigakari), which symbolises crossing into the spiritual realm where time is no longer linear. The space before the bridge is hidden, and no one can see it. The construction of the play, in conjunction with the structure of the Noh theatre, adds a sense of nothingness within the space, as tradition dictates that the performance will always begin with an empty stage where there is no one and no objects in the space, and must end in the same way.
16. Abdel Rahman Munif's *Cities of Salt* writes of an Emir who is driven to madness by the marvels of Western living within the Western mansion built for him by the Westerns who have come to the land, a clear indication of separation and anxiety when the desert floor is covered by the concrete of a modern city. The name of the novel itself is an example of the results of such a collision, indicating that a city built with no origins or means of sustainability and glass cities are reduced to dust. This is an allegory of the sudden and rapid changes that occurred as modern Western philosophy encroached on the ideology. Abdel Rahman Munif, *Cities of Salt*, trans. Peter Theroux (New York, Vintage International, 1989).
17. Natsume Sōseki, in his essay, *The Civilization of Modern Day Japan*, comments on the rapid changes brought about by Japan's sudden and rapid modernisation as it opened its borders at the advent of Meiji and warned against an imminent nervous breakdown. The rise of the city and apartment living not only brought about a new type of architecture but a new type of individual living and sense of isolation, which added to the anxiety of the modern individual within society as they navigated this new urban landscape and a new sense of self-attached to it. With the rise of modernity and increased interaction with the West, *bunka seikatsu* (cultural life) arose, which was associated with efficient in-town living and suburban residences. The first display of model homes exhibited at the Peace Exposition at Ueno (1922) was a massive success and was marketed as *bunka jutaku* or *Kultur* (from German) houses. The resulting expansion and growth of Tokyo became a space for personal exploration and anxiety with a sense of anonymity within a large city away from traditional living and family constraints. This became the urban space of (*toshi kūkan*). Natsume Soseki, "The Civilization of Modern-Day Japan," trans. Jay Rubin, in *Kokoro: A Novel and Selected Essays* (Lanham, Md.: Madison Books, 1992), 281. William J. Tyler, *Modanizumu: Modernist Fiction from Japan, 1913–1938*, (Hawaii, University of Hawaii Press, 2017).
18. Mustapha Hashem El Moussaoui, "Rethinking Heidegger's Dwelling Through Arabic Linguistics," *Journal of Islamic Architecture* 6, no. 2 (2020), http://dx.doi.org/10.18860/jia.v6i2.8454.
19. Jo Tonna, "The Poetics of Arab-Islamic Architecture," *Muqarnas* 7 (1990): 182-97, https://doi.org/10.2307/1523128.

Image Captions
Fig. 1. Man praying next to his camel in the desert. From the collection of Dr. Paula Sanders, Rice University.
Fig. 2. Rakuchu rakugai zu byobu. Momoyama period (1568-1615). Scenes in and around the Capital, pair of six-fold byobu. Attributed to Kano Takanobu, Fukuoka City Museum.
Fig. 3. Comparison of spatial attributes among cultures. By authors.

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Biography

Mohammad Sayed Ahmad is an architect and a PhD holder in architecture and urban design from Tohoku University, Sendai, Japan. His research theme revolves around place-making for children, where he studies the socio-spatial formation of children's spaces. The research questions how spaces are conceptualised and designed and how different planning methods can affect the socio-spatial experience. The research is interdisciplinary in nature; it combines architectural design and planning with sociology and pedagogy through a mathematical analysis model. In the practical field, he previously worked at Kengo Kuma and Associates and Shigeru Ban Architects.

Munia Hweidi received her PhD in Japanese Studies from Sophia University, Tokyo, and is a postdoctoral researcher at Sophia University's Faculty of Global Studies. Her research areas include modernism, world literature, comparative literature, and nature and environmental literature. She is currently the editing manager of a book project discussing Japanese literature from 1989 to 2019, and expanding her research on literature and the environment in Japanese and Arabic literature with a focus on the authors Ishimure Michiko and Abdel Rahman Munif.

Vulnerable architecture as a/n (im)material assemblage

Şimşek, Öykü

Istanbul Technical University, Faculty of Architecture, Istanbul, Turkey, simsekoy@itu.edu.tr

Abstract

This paper aims to challenge architecture's conventional conceptualizations as unwoundable autonomous entities which prioritize certain concepts such as stability, durability, unity, or completeness. It argues that these conceptualizations lead to exclusive approaches of it through binary understandings. For that, the paper carries out a discussion through the term *vulnerability* which Western understandings of architecture commonly avoid. The term *vulnerable* which is derived from the Latin word *vulnerare* means "to wound" and in the dictionary, it is defined as *capable of being physically or emotionally wounded* (Merriam-Webster, 2023). Yet, it is reconceptualized by feminist posthuman theorists (Tsing 2015; Butler 2016) as being inherent to all kinds of bodies (both living/nonliving or human/nonhuman) instead of attributing it to specific groups (e.g., women, animals, children). This inherent vulnerability of all kinds of bodies -including architecture, makes it impossible for any-body to stand alone and positions bodies entangled with other bodies.

As a method, starting from the conceptions of matter and materiality, this paper follows vulnerability in architectural theory and practice through several concepts such as autonomy, singularity, bigness; dependency, openness, and temporality. Through these concepts, it aims to expose several problems related to vulnerability to retool it in a critical way.

Vulnerability of architecture which preconditions a radical relationality requires to rethink conventional conceptualizations of architecture as well as design process which are keen to exclude many others through deeming architectures autonomous.

Vulnerable architecture proposed by the paper through several discussions interrogates the possibility of using vulnerability as a critical tool in the pursuit of a reconceptualization of architecture that does not exclude. It unfolds many discussions around theory, practice, and understanding of architecture-always-in-relation instead of positioning it among dualities such as human-nonhuman, living-nonliving, or material-immaterial.

Key words: vulnerability, materiality, relationality, assemblage, resistance.

1. Introduction

The term *vulnerable* is derived from the Latin word "vulnus" which means "wound." While in the dictionary, it is defined as "capable of being physically or emotionally wounded," originally the term was used to explain physical wounds only. However, since the late 1600s it has been used to also suggest defenselessness against non-physical attacks. [1] Besides its etymological and dictionary definitions, in feminist-posthuman theories, the term is reconceptualized affirmatively through the notion of relationality. In these theories, vulnerability, rather than being accepted as an essential quality of certain bodies, is acknowledged as inherent to bodies of any kind –both human and nonhuman or living and nonliving. It is underlined as the first condition of forming relations between multiple bodies. Conception of vulnerability as a common feature of any-body, questions many related concepts such as agency or resistance as well as ontological understanding of the embodied subject and its so-called static boundaries.

Feminist philosopher Judith Butler rethinks the relationships between vulnerability and resistance: Contrary to reductive and essentialist conceptualizations that attribute vulnerability to certain groups (e.g., women, nonhumans, animals, etc.) that are *only* acted on or affected by; and agency to another group that *only* act on or affect others, she underlines the ambiguous territory between vulnerability and agency. According to Butler, we are all vulnerable creatures, however, our vulnerability comes to the fore only when an infrastructure that supports us fails.[2] Not only this understanding defines body as a relation rather than an entity, but also it enables us to interrogate the position of architecture or architectural supports among these vulnerable bodies. However, as I will detail in the following chapters, the uncertainty of what this "body" Butler refers is, also bears the risk of acknowledging the architectural body outside of the domain of vulnerability as a mere background.

In a similar vein with Butler, Leticia Sabsay also defines one of the conventional meanings of vulnerability as "unwanted permeability" and claims that permeability exposes the relational character of vulnerability by highlighting the impossibility of stable boundaries of the vulnerable "I."[3] Moreover, anthropologist Anna Tsing takes this notion of radical relationality further and preoccupies the relationships between vulnerability, precarity, and resistance through more-than-human assemblages which we are all thrown due to our inherent vulnerability. According to Tsing, precarity is the circumstance of being vulnerable to others and it is the very first condition of our coming together in different assemblages.[4] Basically, it is our vulnerability and need for care that throw us into shifting and unstable assemblages and we as well as our others are remade through the unpredictable encounters of them.

Similar to common definitions of vulnerability, it might be said that conventional Western conceptualizations of architecture are also keen to avoid vulnerability by attributing it a similar negative meaning. In theory and practice, architecture is usually conceptualized as an unwoundable material object which is articulated and designed through some internal rules that make sure of its so-called autonomy. While this approach dates back to the time of Vitruvius with a search for unity and harmony; it is the time of the Renaissance through Leonardo da Vinci's Vitruvian Man when a proper definitive role for the "architect" proposed: Vitruvian Man located at the center of the life with his ideal body and proportions and separated from all of his earthly relations, depicts architect as a creator or a form-giver. It can be said that from that time, architecture is to be produced through this privileged man's biological and political existence and aims to provide a specific way of life that takes care of this person's continuity. For example, Catherine Ingraham in her book *Architecture, Animal, Human: The Asymmetrical Condition* follows this tradition through several examples from architectural history. [8] Through Colin Rowe's reading of Palladio's Villa Capra-Rotondo and Palladio's positioning of the user according to his own point of view, Ingraham argues that there is an asymmetrical condition between architecture and life. According to Ingraham, the architect's point of view shapes the occupant's way of coming and going, entering and exiting, standing and moving, owning and operating, seeing and being seen, framing and being framed way before the life that it will inhabit occurs. [5] In other words, architecture puts restrictions on the life it inhabits and proposes a specific way of life that guarantees the asymmetrical condition or in other words, its autonomy. In the end, architecture is conceptualized and designed as an unwoundable material object. Later, this idea of autonomy is taken forward by the architect Peter Eisenman (which I will detail below) and in other discussions extended in a critical way through a discussion of nature in architecture (e.g., Mostafavi and Leatherbarrow, 1993; Gissen, 2009). However, here it might be summarized that these conventional Western conceptualizations of architecture that this paper refers to, is architecture's or architect's long-term search for the autonomy of an unwoundable material object. As I indicated above, this material object stands there to propose certain ways of life or simply aims to make the privileged human subject aware of this way of life without actually being informed by the bodies circulate. It can be said that these conceptualizations prioritize certain concepts such as stability, durability, unity, or completeness.

Moreover, these invulnerable conceptions of theory and practice that promote such concepts, also produce dichotomies that exclude many others who are positioned against the absolute "one:" A completed whole, with its fixed boundaries, inevitably produces binaries such as inside/outside,

material/immaterial, or body/space. A thing can be either the "one" or the opposite to the "one." Jane Rendell argues that in conventional architectural practice to position a building as a "methodology" instead of an end product of a method or process that makes a building is to hold a radical position.[6] In an environment where architecture is conceived as autonomous material objects, Rendell, as an alternative to this conventional architectural practice, proposes the term "critical spatial practices" influenced by the discussions of Henri Lefebvre and Michel de Certeau on spatial practices. She uses this term to define both everyday activities and creative practices which are the field of resistance against the dominant social order of global corporate capitalism. From this point of view, she proposes to transcend the boundaries of "architecture."[7] Similarly, vulnerability, through being inherent to bodies of any kind (including architecture) and its material, immaterial and discursive dimensions, penetrates the everyday. In this sense, it can be said that the concept has the potential to transcend the dual practices of thinking and making in architecture through the radical relationality it bears (or the impossibility of creating a finished whole). I argue that architecture's, architect's, or any body's impossibility of standing alone in an entangled world, should be proposing another way of thinking and doing.

In this paper, I follow the term vulnerable in architectural theory and practice (both through its presence and absence) in order to expose the intrinsic problems in Western humanist conceptualizations and propose an alternative to it. I research whether such an alternative bears the potential to transcend the above-mentioned dualities or boundaries that prevent a reconceptualization of inclusive architecture.

I position myself among feminist posthuman theories which pay regard to relationalities instead of heroic autonomous objects or architects. Starting from the conceptions of matter and materiality, I unveil many vulnerability-related concepts in architecture such as relationality, dependency, openness, simultaneity, temporality; autonomy, singularity, and bigness. My reason for choosing the subject of matter and materiality as my starting point and through that rethinking the entanglement of material and immaterial, is vulnerable architecture's critical position in those assemblages which are heterogenous in kind –both material and immaterial. This research aims to interrogate the possibility of using vulnerability as a critical tool in pursuit of a reconceptualization of architecture that does not exclude.

2. Matter and materiality in architecture

The stories of vulnerability in architecture can be traced back to the scale of matter and discussions of materiality that arise from different conceptualizations of it. The relationships that architectural body establishes in multiple scales, make it possible to discuss vulnerability that is usually neglected in theory and practice.

Conventional conceptualizations of architecture that date back to Vitruvius, evaluate "matter" as singular; separated from its relations and temporalities. Inert and passive conceptualizations of matter that separate it from its processes entail a bifurcation between material and immaterial. While in the process of the (re)production of architectural space, both material and immaterial qualities bear importance; immaterial is commonly excluded because of being fluid and uncontrollable in favor of the material which is solid and stable. This bifurcation of material-immaterial induces many other dualities including interior-exterior, body-space, body-mind, or container-contained. Moreover, the duality of material and immaterial also conceptualizes architecture as an autonomous material object which is not affected by immaterial qualities of space and leads to an asymmetrical condition between body and space, or between architecture and life in Catherine Ingraham's words.[8] As Hill argues that the purpose of home is to keep the inside inside and the outside outside since home is associated with material as being solid and stable while the exterior world is associated with immaterial as being fluid.[9] Similarly, Adrian Forty states that "design" creates an opposition between "building" and everything in architecture that is immaterial, in other words, "design" concerns what is not construction.[10] It may be said that there is a relationship between material-immaterial duality that results from matter's inert and passive conceptualizations and approaches that portray a hero architect excluding immaterial due to its uncontrollability. Considering that, in order to establish a relationship between the vulnerability of architecture and the entanglement of material and immaterial, it seems necessary to discuss what is deemed as "matter" in architecture and what is not.

Katie Lloyd Thomas, starting from the matter-form relationship, examines the occurrences of matter in architecture; and through materiality, she questions the possibility to rethink the relationships between architecture and the social and political. [11] In Aristotle's understanding of hylomorphism, matter is conceptualized as singular and undifferentiated. It is not conceptualized to have an impact on the determination of the form, on the contrary form is what differentiates matter. Thus, Aristotle's depiction of bronze as primary matter stems from its specific properties: Bronze, through its ability to be liquid and molded as well as its own formlessness, can protect the shape that it is given. In this understanding, charcoal cannot be accepted as primary matter; because if you try to change its shape it turns into dust. According to Thomas, Aristotle's depiction of matter as singular and undifferentiated

restricts primary matter to specific properties and excludes multiple materialities.[12] Matter prioritized in these conceptions can be said to be invulnerable since its reduction to specific properties positions it abstracted from its relations with other matters as well as their affects: Any differentiation on the matter can only occur through a transcendent and intentional act (e.g., architect giving form to undifferentiated matter) and the matter proceeds to protect its given form. This understanding ignores contingencies of matter's further encounters.

Materiality is constructed through matter which is controllable, passive, and indifferent to contingent encounters. Immaterial which is uncontrollable and related to terms such as permeability, porosity, or fluidity is excluded on behalf of the material. As I briefly indicated above, this exclusion of immaterial proposes a whole whose so-called static boundaries exclude contingent encounters and possibilities or simply the relations that matter builds: With the definition of what is counted as material; immaterial occurs as anything that promises to transcend the boundaries of the whole. Greg Lynn, through his discussion of "whole" concept of architecture, argues that architecture's dependence on the model of a unified body since the time of Vitruvius ignores intricate local behaviors of matter and their contribution to the composition of bodies. According to Lynn, architecture's fundamental quest for a unified body as a completed whole proposes a closed system whose parts are organized with top-down methods. Ultimately, this top-down approach ignores matter's entangled local relations.[13]

Sanford Kwinter, in a similar approach to Lynn, comprehends matter through its encounters and gives an example of tree: According to Kwinter, when a tree is organized to function as a column or a beam, what is chosen for "expression" is a set of properties of cellulose. On the other hand, when a tree is organized as a log for burning, what is chosen for "expression" is the fire which already exists in the tree as dormant.[14] Here, matter's expressions are chosen by contingent encounters as only one possibility of multiple possibilities. Thus, unlike invulnerable conceptions of matter that assume it to protect its given form, here it is vulnerable to encounters and entangled relations through which the new is produced. Yet, what both Kwinter and Lynn forget or intentionally undermine is that these encounters that render the tree as a log or a column are not "innocent"[15] encounters; rather they are social, political, and situated. As Douglas Spencer argues these comprehensions of matter leaves no room for contradictions and only cares about differentiation that comes with the inclusion of the harmonious.[16] Where there is no contradiction or incompatibility, it can be said that it is not possible to talk about the existence of a criticism or critical architecture. Thus, it becomes clear that these approaches have no social-political concerns.

2.1. Deconstructivist Architecture: "innocent" encounters of matter

The exhibition *Deconstructivist Architecture* organized by Philip Johnson and Mark Wigley in MoMA in 1988 may be a good example to discuss above mentioned so-called innocent encounters. The announced aim of this exhibition was to challenge the very values of conventional architecture such as harmony, unity, and stability and expose the wounds intrinsic to the building. Thus, the exhibition through its several participants whose approaches differentiate on a wide spectrum, raises important questions on vulnerability of architecture. Here, I briefly aim to preoccupy these questions through several concepts exposed in the exhibition such as autonomy, singularity, and bigness.

Although not directly, the exhibition *Deconstructivist Architecture* points out the vulnerability avoided in architecture through several concepts. One of the curators Mark Wigley argues that architect's pursuit of pure form excludes instabilities and disorders: Buildings are produced with simple geometric forms (cube, cylinder, sphere, cone, pyramid, etc.) through compositional rules that prevent any form to contradict another. Any deviation from this order threatens architecture's formal values of harmony, unity, and stability. In other words, pure form is there to protect architecture from contamination. According to Wigley, this is what all the different approaches included in the exhibition criticize in common. Different participants in different ways declare that the pure form is contaminated. Here their aim is not to dismantle the architectural object; rather to expose architecture's inherent wounds and flaws; and destroy its formal economy.[17] However, even though the exhibition started taking a critical position against the ignored vulnerability of architecture, it can be said that the initial critical ground is destroyed due to the relationships established with the notion of autonomy as well as discussions solely carried out on form. Wigley establishes a relationship between purity of form and architecture's conventional tendencies; however, as Jeremy Till states this new formal complexity turns out to be as conservative as the stability that it aimed to destroy. The autonomy of the architecture is reinforced with formalist concerns and the manipulation of form is glorified as architecture's fundamental interest.[18]

For example, one of the participants Peter Eisenman proposes the term "singularity" following Krauss' proposed relationship between an object's singularity and its relationship with previous modes of legitimation: Singularity does not aim to take the position of a thing (e.g., a column) or does not reject its benefit; yet it denies the sign function (e.g., the sign of the column's structuring function).[19] Disjunction from the sign function –or in other words architecture's semiotic and functional history, proposes a singularity which is in a way the manifest of architecture's autonomy. In other words, it

might be said that Eisenman founds the critical again inside architecture; in the difference between the thing and the sign. However, at the same time or on the contrary, his denial of any legitimate system (historical, semiotic, or functional) and disregarding the continuity between past-present-future destroy the critical ground. An architecture that is self-reflected and denies any legitimate system can only be produced through coherent parts coming together while ignoring anything that seems incompatible or uncontrollable. At the end, stability and harmony which are criticized at the beginning, are produced with Eisenman's project of autonomy.

Similarly, another participant of the exhibition Rem Koolhaas gets involved in the discussion of autonomy through the term "bigness" in his article *Bigness, or the Problem of Large* that he wrote a few years after the exhibition. According to Koolhaas, beyond a certain scale, architecture obtains the properties of bigness and that bigness proposes an ideological program beyond the will of its architects; only because of its dimensions. "Big Building's" impossibility of being controlled by a single architectural gesture triggers the autonomy of its parts. The distance between the core and the envelope increases to the point where the façade cannot uncover what happens inside. Bigness is no longer stands there as a part of urban texture; it exists at most it coexists. Context disappears.[20] Koolhaas does not take bigness in a critical way; on contrary, he accepts it as a reality that should be faced and utilized. It might be said that Koolhaas' bigness, just like Eisenman's singularity, ends up with architecture's reconceptualization as autonomous static objects. Their loss of the critical attitude that they aimed at first, leads them to reproduce what they criticize: conventional conceptualization of architecture as autonomous entities.

Here through the concepts of autonomy, singularity, and bigness, it becomes clear that the exclusion of the social and political (immaterial) from matter and materiality, necessarily connects with the notion of harmony or consistency. The search for harmony neglects both the inconsistencies and temporalities since what is deemed as consistent is already included in the proposed architectural object. In the end, one more time architecture is conceptualized as an invulnerable autonomous material object.

3. (Im)material assemblages of contradictions

The discussion of consistencies and contradictions is important to rethink architecture as vulnerable since these two are what define how the assemblages of vulnerable architecture are established and destroyed. Returning to the discussion of vulnerability and resistance, more-than-human assemblages that we are all thrown into due to our vulnerabilities seem critical. Here the question emerges as whether it is possible to go beyond understandings of architecture as autonomous material objects by rethinking it as a form of resistance that emerges from these assemblages.

Taking a way more critical position than the participants of *Deconstructivist Architecture*, Jill Stoner refers to contradictions while she discusses the relationship between power and vulnerability through the practices she calls "minor architecture." While Stoner explains minor architectures as "opportunistic events that undo the structures of power;" she redefines architecture as "making of spaces within the already built" instead of "making of buildings with materials of nature." [21] Top-down power structures build major architectures and minor ones are derived from these architectures by dismantling and rebuilding them in different ways. Minor architectures are temporary and incomplete as well as vulnerable, permeable, and unstable. Moreover, as Bremner and Till argue, these minor architectures weaken architecture's status as a visible object while necessarily proposing a deconstruction of the architect/subject.[22] It can be said that while Stoner starts her discussion with the notion of permanence that historically means stability, she exposes the vulnerability of major architectures: Minor architectures can emerge because major architectures are also flawed, permeable and vulnerable.

However, even though Stoner's discussion is developed around several examples of minor actions, her acceptance of major architectures as preconditions for the minor architectures to emerge reduces the discussion of vulnerability solely to function. For instance, both of Stoner's example of Torre de David which is a semi-finished tower in Caracas that was converted into a vertical favela and the example of the roof of PG&E building that was occupied by falcons, discuss minor architectures only through the occupation of buildings in different ways that were built for a specific group of people and usage. Here the critical question seems to be whether major architectures precede minor ones or these two are created simultaneously. Can simultaneity and vulnerability's common and relational dimensions propose a conceptualization of architecture of support systems or resistances rather than of autonomous objects?

Here, in order to reveal the problems of major architecture's positioning as a starting point, the concept of assemblage should be detailed. Assemblages may be defined as open-ended temporal gatherings of all kinds –both human and nonhuman or living and nonliving. They are unstable, contaminated and always shifting. They work through various scales: each assemblage is entangled with other assemblages of different scales. In architectural theory, the term assemblage often refers to Deleuze and Guattari's usage of the term in *Thousand Plateaus: Capitalism and Schizophrenia*.[23] Yet,

feminist posthuman theories use it to preoccupy resistance emerging from the gatherings of simultaneous multiple ways of beings. For instance, Anna Tsing underlines the potential of more-than-human assemblages for collaborative survival due to their indeterminate and multidirectional multiplicities contrary to linear stories of progress. According to Tsing, dreams of progress and modernization "drop out" many others which seem to be trivial and they only sort out the parts of the present that might lead to the future. This means dropping out of the precarity or precarious situations as exceptions which are actually on Tsing's account the very condition of our coming together in these assemblages.[24]

Yet, what is critical for my argument is that besides our vulnerability that throws us into unstable assemblages, these assemblages themselves are actually vulnerable since they are temporal due to their inherent relationality with other assemblages. Moreover, these assemblages are also supportive because of this vulnerability since after certain assemblages are destroyed new ones are produced to deal with other precarious situations. Tsing's qualifier "polyphonic" to Deleuzian assemblage seems relevant here. Polyphonic assemblages are not ensembles of harmonic unities rather they are simultaneous melodies or temporal interwoven rhythms that are created by both harmony and dissonance.[25]

In a similar vein, feminist philosopher Donna Haraway refers to this dissonance through the openness of assemblages due to their relations with different scales of space and time. Haraway through referring individual animals –human and nonhuman, as entangled assemblages of relatings knotted at many scales and time with other assemblages, underlines their varying degrees of openness to attachments and other assemblages.[26] It might be said that there is an obvious consonance between Tsing's idea of harmony and dissonance and Haraway's degrees of openness which is a matter of scale. It is informed by multiple relations of assemblages with whatever scale of space or time, and this relation brings different scales into the discussion: from molecules to architectures. Each intervention re-establishes certain assemblages, and their affect to these assemblages is only a matter of scale.

At this point, if we return to the discussion of minor architectures, it seems clear that with the idea of minor architectures emerging after major ones are built, it is not possible to talk about assemblages that are produced simultaneously with different scales of space and time whose parts (things, acts, or relations) are not prior to these assemblages. In other words, assemblages (including major architectures) are not produced in autonomous ways. Instead, they always exist entangled with previous and future assemblages. Thus, instead of looking for minor architectures inside the major ones, it seems critical to focus on minor architectures' own vulnerabilities that are based on contingencies and bottom-up support systems' uncategorized-unpredictable strategies.

3.1 Vulnerable architecture's position in (im)material assemblages

As I briefly indicated in *Introduction*, rethinking architecture as parts of assemblages bears the risk of rendering them as mere backgrounds. Butler, through an example of the city street and the protest, acknowledges the necessity of knowing what supports a body or what this body's relation to that support might be, to be able to talk about that body. She states that the pavement and the street are the requirements of the body to be able to exercise its right of mobility. When these environments start to fail or to become unsupportive, we are left to fall and our capacity to exercise our most basic rights is put at risk.[27] Moreover, feminist theorist and architect Helene Frichot, with a reference to Butler, underlines that when we protest, we also protest for the street itself since contrary to what is commonly assumed it is not there as an invulnerable infrastructure waiting ready in every occasion.[28]

In my opinion both Butler's and Frichot's emphasis on the material extent of vulnerability among its immaterialities, draws attention to the relational and ubiquitous domain of vulnerability that penetrates all aspects of everyday life –both public and private. It is obvious that the position of architectural supports in these relations is critical. However, I argue that it is not only because they provide the material conditions through which vulnerabilities are converted into forms of resistance against precarious situations, but also because these architectural supports themselves last or fail. In other words, the ubiquitous understanding of vulnerability that circulates through any kind of body is not always meant to lead to a reconceptualization of architecture as one of these bodies that are also affected by besides affecting them. It might be said that even though Frichot points out the vulnerability of street, both her and Butler's taking of failure of the supportive environment as a given situation or a starting point bears the risk of acknowledging architectural supports outside the domain of relational or shared vulnerability and positioning them as scenes for actions to take place without actually being affected by these actions.

3.2 A thing among other things (or not): Passage 56

Vulnerable architecture, instead of being conceptualized as a mere background, stands there as *a thing among other things,*[29] which both affects and is affected by the acts of other human and nonhuman bodies. One of the ways to avoid deeming it as a background could be to discuss design

process instead of an end product as a starting point. Moreover, once rethought as a process, vulnerable architecture unveils one last important concept of this paper which is temporality. For that, the project Passage 56 which was started in 2006 by atelier d'architecture autogérée (aaa - studio for self-managed architecture) can be a good example to discuss the above-mentioned relations between vulnerability, resistance, and more-than-human assemblages as well as to unveil problems inherent to the project's design process.

Passage 56 is a transformation project of an empty plot to a self-managed vegetable garden in a high-density residential area in Paris. As a microscale project enabling site-specific interventions, through several tactics that aim to unveil site characteristics, it can be read as a trial of rendering architecture vulnerable: Several acts including project meetings with local people, open construction site, or welcoming people with everyday activities such as cleaning or gardening for which no specific skill or knowledge is required, enable simultaneous ways of beings come together and transform the project as well as each other. Emphasizing the act of doing through participating in the construction site, feminist architect and theorist Doina Petrescu who is the co-founder of atelier d'architecture autogérée states that any "guest" through being covered by the project insurance, was able to participate in activities on site during the construction of Passage 56, leading the construction site to be the actual social activity of the project.[30] However, here underlining the construction site as the actual social activity while referring to a specific period of time seems problematic when the reciprocal relationships are rethought: What does generate contradictions when an open process ends up being a static material object?

Although the self-management strategy of Passage 56, could be discussed as an architecture of resistance since it enables several assemblages to be built and destroyed with the simultaneous interference of different people, its way of narrowing down the open construction site to the fixed function of gardening can be seen as moving away from generating contradictions in the two-years period. In this sense, it might be said that ignoring temporalities and planning design process as a preformed period of occupation, construction, and gardening leaves no room for contingencies that could be used as a strategy to escape from stability. A reconsideration of this "single plot" in relation to a broader network could open up this closed static system through thinking the project with different assemblages of many scales.

4. Vulnerability in search of inclusive architecture

The term *vulnerable*, once conceptualized as a critical tool in architecture, bears the potential to expose many problems inherent to conventional conceptualization of architecture as well as design process. For that, through the paper, several terms were followed in architectural theory and practice. It might be said that all these discussions and concepts lead to a radical relationality that eventually requires to position architecture among many living and nonliving bodies. Thus, the idea is not to make a proper definition of vulnerable architecture or to create a checklist showing how to rethink and design architectures rendered vulnerable, rather to go on to discussion.

Notes

1. Merriam-Webster Dictionary. https://www.merriam-webster.com/dictionary/vulnerable
2. Judith Butler, "Rethinking Vulnerability and Resistance," in *Vulnerability in Resistance,* ed. Judith Butler, Zeynep Gambetti, Leticia Sabsay (London: Duke University Press, 2016), 13.
3. Leticia Sabsay, "Permeable Bodies: Vulnerability, Affective Powers, Hegemony" in *Vulnerability in Resistance,* ed. Judith Butler, Zeynep Gambetti, Leticia Sabsay (London: Duke University Press, 2016), 285-286.
4. Anna Tsing, *The Mushroom at the End of the World: On the Possibility of Life in Capitalist Ruins.* (New Jersey: Princeton University Press, 2015), 20-23.
5. Catherine Ingraham, *Architecture, Animal, Human: The Asymmetrical Condition.* (London: Routledge, 2006), 116.
6. Jane Rendell, "Critical Spatial Practices: Setting Out a Feminist Approach to some Modes and what Matters in Architecture" in *Feminist Practices: Interdisciplinary Approaches to Women in Architecture,* ed. Lori Brown (London: Routledge, 2011), 24-27.
7. Ibid.
8. Catherine Ingraham, *Architecture, Animal, Human: The Asymmetrical Condition.* (London: Routledge, 2006), 1:
Through several examples Ingraham argues that autonomous conceptualizations of architecture create an asymmetrical condition between architecture and life and claims that even though biological and psychological life are necessary preconditions for architecture, it must always be, at some level, indifferent to life within it.
9 Jonathan Hill, *Immaterial Architecture.* (London: Routledge, 2006).
10 Adrian Forty, *Words and Buildings: A Vocabulary of Modern Architecture.* (London: Thames & Hudson, 2000).
11. Katie Lloyd Thomas, "Architecture and Material Practice" in *Material Matters: Architecture and Material Practice,* ed. Katie Lloyd Thomas (London, Routledge, 2007), 2-4.
12. Ibid.
13. Greg Lynn, "Body Matters" in *Folds, Bodies and Blobs: Collected Essays*, ed. Michele Lachowsky, Joel Benzakin (Bruxelles: La Lettre Volee, 1998), 135-140.
14. Sanford Kwinter, "The Judo of Cold Combustion" in *Atlas of Novel Tectonics*, Jesse Reiser (New Jersey: Princeton University Press, 2006).
15. Donna Haraway, "Situated Knowledges: The Science Question in Feminism and the Privilege of Partial Perspective," *Feminist Studies* 14, no.3 (Autumn, 1998): 584:
Haraway argues that contrary to assumed, the positions of subjugated are not "innocent" positions, rather they are partial, situated and always constructed. Here I use the term "innocent" with a reference to Haraway, however slightly different: Matter's encounters are not neutral, innocent or unknowable at all, but they are always situated in social and political contexts. By doing that I aim to preoccupy our own responsibilities in these encounters.
16. Douglas Spencer, *The Architecture of Neoliberalism: How Contemporary Architecture Became an Instrument of Control and Compliance.* (London: Bloomsbury Publishing, 2016).
17. Mark Wigley, "Deconstructivist Architecture" in Deconstructivist Architecture, ed. James Leggio (New York: New York Graphic Society Books, 1988), 10-20.
18. Jeremy Till, *Architecture Depends.* (Cambridge: MIT Press, 2009), 21.
19. Peter Eisenman, "Autonomy and the Will to the Critical" *Assemblage,* no. 41 (April, 2000): 90-91.
20. Rem Koolhaas, "Bigness or the Problem of Large" in *Small, Medium, Large, Extra-Large* (New York: Monacelli Press, 1995).
21. Jill Stoner, *Toward A Minor Architecture*. (Cambridge: MIT Press, 2012), 16.
22. Lindsay Bremner, and Jeremy Till, "A Cracking Read: Toward a Minor Architecture by Jill Stoner" *The Architectural Review*, 2012.
23. Gilles Deleuze, and Felix Guattari, *A Thousand Plateaus: Capitalism and Schizophrenia*, trans. Brian Massumi (Minneapolis: University of Minnesota Press, 2005).
24. Anna Tsing, *The Mushroom at the End of the World: On the Possibility of Life in Capitalist Ruins.* (New Jersey: Princeton University Press, 2015).
25 Ibid.
26. Donna Haraway, *Staying with the Trouble: Making Kin in the Chthulucene.* (Durham: Duke University Press, 2016).
27. Judith Butler, "Rethinking Vulnerability and Resistance," in *Vulnerability in Resistance,* ed. Judith Butler, Zeynep Gambetti, Leticia Sabsay (London: Duke University Press, 2016), 13-19.
28. Helene Frichot, "Infrastructural affects: Challenging the autonomy of architecture" in *Architectural Affects after Deleuze and Guattari*, ed. Marko Jobst and Helene Frichot (London: Routledge, 2021), 7.
29. Helene Frichot, *Creative Ecologies: Theorizing the practice of architecture.* (London: Bloomsbury Visual Arts, 2019):
The phrase "a thing among other things" is used by Helene Frichot against the habit of understanding architecture as autonomous objects in theory and practice. Instead of the "object" which is often supposed to present architecture and its formal autonomy, she describes architecture as a thing among other things in terms of relationality.
30 . Doina Petrescu, Constantin Petcou, "Tactics for a Transgressive Practice" *Architectural Design* 83, no. 6 (November/December), 64.

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Acknowledgments

Biography

Öykü Şimşek is an Istanbul-based architect and research assistant at Istanbul Technical University (ITU) where she is also working on her thesis at Architectural Design Master of Science Program. She took her bachelor's degree in architecture from ITU. During her undergraduate education, she spent 2017-2018 academic year at Politecnico di Milano with Erasmus+ scholarship. She has participated in several national and international competitions and has been a part of different biennale working groups including A School of Unknowables within the frame of 4th Istanbul Design Biennale and Informal Parking Lots of Istanbul within the frame of XII. Sao Paulo Architecture Biennale. She was one of the co-organizers of the international workshop "Speculative Nematode: Oddly Possible Narratives for Living Together" in September 2022. She is a researcher at "Socially Situated Architectural Pedagogies –SArPe" which is supported as Erasmus+ programme. Her research focuses on feminist-posthuman theories and collective ways of making-space.

Platform
As an Architectural Ecotone

Soysal, Zeynep
Research Assistant, Atilim University, Department of Architecture, Ankara, Turkey, zeynep.soysal@atilim.edu.tr

Abstract

Platform is an architectural element which can be studied both in terms of its physicality and its metaphorical implications. The main aim of this research is to reintroduce the term as an anachronical architectural element, which forms a "ground" and thus reinforces the production of architectural knowledge in relation to ecological issues. The word "platform" itself could be traced to sixteenth-century French, *plateforme* which could directly be translated to English as "ground plan" and "flat shape." As a surface, flatness is inherent in relationships platform form with the ground. In this sense, platform as a surface has the capacity to define complex volumetric architectural relations. However, an ecological approach to platform cannot be defined by only one flat surface, but rather through a set of intricately related layers. Thus, platform as an intermediary architectural element implies an intensity of relations that is formed through the modification of ground. When defined as such, platform offers a possibility for architecture to relate to ground in multiple scales and layers such as infrastructural, environmental, social, and cultural. Parallel to this, Ernst Haeckel defines the term 'ecology' as "the science of 'the household of nature'." (Rawes 2013). With reference to this definition, the architecture of the Anthropocene, can be considered as 'ecological' in terms of reflecting the complexity of relationships between what is material, cultural, social, and political (Rawes 2013). In relation to ecology, platform can possibly be redefined together with the term ecotone. When defined by ecological terms "an ecotone refers to any transitional area between two ecosystems, such as grassland and forest or forest and river edge" (Kahn 2021). When platform is defined through an ecotone, it becomes possible to investigate platform as a dynamic interface which embodies such interactions and relations in environmental, social, cultural, and functional narratives simultaneously.

Key words: platform, ground, ecology, ecotone.

1. Introduction: Why, How, Which Platform?

Platform is an architectural element which can be studied both in terms of its physicality and its metaphorical implications. The main aim of this research is to reintroduce the term as an anachronical architectural element, which forms a "ground" and thus reinforces the production of architectural knowledge in relation to ecological issues. With each reinterpretation, it makes new connections and directly relates itself to the former knowledge of architecture by being both a foundational and historical element. In terms of the way it replicates itself in different contexts, a platform could imply a terrace and through expansion become a public square. Etymologically, the word platform is derived from sixteenth-century French *plateforme*[1]. The direct translation to English is "ground plan" and "flat shape."[2] Through both physical and etymological references flatness is inevitably inherent in platform. However, this work attempts to formulate platform from a wider perspective in which depth becomes a significant attribute. Pier Vittorio Aureli and Martino Tattara in their "Platforms: Architecture and the Use of the Ground," argues that, physically, platform could simply be seen as a manipulation of the ground. It becomes a form of human domestication in which the land is perceived as a surface which is gradually manipulated and controlled.[3] They construct their argument by initially dwelling on sedentary domestic space. In this sense, the platform can simply be defined as "a raised level surface."[4] Furthermore, with reference to the anthropologist Tim Ingold, they argue that

> "With the gradual passage to semisedentary and sedentary life, permanence become more an issue of domesticating land as a "surface." If the rise of domestic space predates the rise of agriculture, then leveling the ground for the sake of inhabitation can be seen as the earliest form of permanent living."[5]

With reference to Çatalhöyük, they elaborate the use of elevation to differentiate the functions within the early dwelling.[6] In this sense, Aureli and Tattara reinterprets the elevations in early dwellings as a stage. Thus, the elevated floor of the house becomes a stage in which the everyday life is ritualized.[7] After introducing the platform in domestic space, with the examples of Mesopotamian settlements, platform is reintroduced as a communal space in which the ground is controlled. Platform in this context becomes a "public archetype."[8] Through the threshing of the floors, by paving the ground, platform becomes a place for encounter, witness, and transformation.[9]

Another reference can be Jørn Utzon's "Platforms and Plateaus: Ideas of a Danish Architect," where he defines platform as an "artificial ground" in which the human regulation and adaptation of nature puts greater emphasis on a spiritual content.[10] His excursion in Mexico is a significant example which introduces a different geographical context for tracing the early emergence of symbolic plateaus. Utzon's description of the large platforms built by Mayan civilization in Mexico is significant in terms of the symbolic character of the platform. He describes his experience by stating that "[t]he feeling under your feet is the same as the firmness you experience when standing on a large rock."[11] Utzon's description implies the stereotomic aspect of the platform together with its massiveness and its relationship with nature. The boundary created through the platform is also evident in the feeling of firmness. This is also evident in Utzon's sketches. His lines depict the relationship between the built platform and the topography, and how the platform dominates the hill and creates a physical boundary. He also introduces his own work with reference to different uses of platform and how the use of platform enhances the presence of architectural object. Aureli and Tattara also refers to Utzon by stating that "[Utzon] put forward an idea of architecture that defines space without enclosing it."[12]

Another example of a platform can be the Greek temple which is earthbound in terms of its relationship with the ground. This relationship could also be traced in Vitruvius' writing. For the placement and the construction of the temples he states that;

> "While transmitting to us the proper arrangements for buildings of all kinds, they were particularly careful to do so in the case of temples of the gods, buildings in which merits and faults usually last forever."[13]

In a way, this could be interpreted as the counter-play between what is man-made and what is natural, and the result is the balance of these two distinct elements through architecture.[14] The general configuration of the Greek temple is significant. In a Greek temple, a large platform is raised on a stone structure, and it is reached through steps that surround the whole platform. This stone structure is usually a *crepidoma* which ascends through three-steps. *Crepidoma* is rather an artificial intervention which mimics the landscape, the mountains. The temple is artificially raised by a masonry structure. This stone structure creates a sharp contrast between the temple and the landscape. Vincent Scully defines this relationship as an opposition between landscape and the built environment[15] However, instead of being just a self-contained architectural element, steps are rather more relational forms.[16] Thus, they acquire meaning through their relationship with the surrounding built environment. In such context processions become important acts which shaped and were shaped by human movement.

"Processions were used to resolve problems of identity and territory between communities with pre-existing sanctuaries and centers, as in the case of the famous sanctuary dedicated to Demeter in Eleusis. This was linked to that in Athens in the vicinity of the Agora through the famous Sacred Way, and by the ritual of the Eleusinian procession."[17]

These monumental steps suggest different uses in terms of their placement and length. Mary B. Hollinshead in her book, *Shaping Ceremony: Monumental Steps and Greek Architecture,* puts forward three different uses for the monumental steps together with possible human behaviors they enhanced. The three uses suggested by Hollinshead include retaining walls, routes of access and grandstands for viewing events.[18] With reference to these uses, she states that

"[s]teps make uneven terrain convenient for humans. They are pathways and destinations for climbing and descending, for sitting and standing. As pathways, steps create processional routes toward and within cities and sanctuaries; as destinations, they serve as grandstands for viewing and participating in communal events. Some steps imply movement, while others suggest static behavior. In fact, the dimensions of steps express a direct relation to body posture, so that we can often tell whether their users are sitting, standing, or walking. By examining monumental steps in Greek architecture, we can derive behavior from architectural form, and trace interactions between human activities and the built environment."[19]

Hollinshead's work becomes a significant departure point in order to put forward possible implications of the *crepidoma* beyond its self-contained formal attributes. Thus, steps become an important element which both control access and frame space.[20] The steps become substantial extensions which control the overall regulation of the built environment. In addition to these attributes, through social patterns, monumental steps acquire inclusive functions and public role.[21] In this sense, temples are used as demarcating the circulation networks within the *polis*, a way to elaborate and control identities and processions.[22] Hence, the temple platform becomes a part of a communal tradition.

To further the discussion on platform, in addition to above mentioned social relationships it is necessary to introduce non-human conditions. Therefore, this text introduces platform as a possible architectural ecotone to expand its definition. However, it does not claim to make a rigid definition rather it claims to expand the ways in which platform can be defined in different contexts. In order to expand the definition of platform, this research initially mobilizes itself anachronically. The next part of this text focuses on platform as a deep surface before introducing it as an ecotone. Third part focuses on platform as an ecotone and relies on the possibility to define the campus of Middle East Technical University as an ecotone. Finally, in concluding remarks it speculates on the possibility of platform to be an ecotone.

2. Platform: as a Deep Surface
Prior to framing platform as a "deep surface" it is significant to expand the definition of the term surface by attributing depth to it. Initially, the word, surface, comes from 1610s French, *surface,* defined as "an outermost boundary, outside part."[23] The word consists of "sur" and "face." *Sur* meaning above while *face* is derived from Latin *facia,* which could be translated as "form imposed on something."[24] Moving beyond etymological context, Benjamin Blackwell defines surface by stating that:

"Through attempts to outline a comprehensive definition of the term 'surface' almost always appear futile, the surface is often the point at which a material or a body is able to come into contact with others: surfaces usually occur at a point at which bodies meet."[25]

Instead of a rigid definition in which surface is defined only through what is above, Blackwell offers a definition that presents a rather interactive approach. With this surface becomes a place of multiple occurrences. Another significant approach that Blackwell offers is that the surface he defines is multiple.[26] However, he refers to the term not as multiplicity but as *manyfoldedness.*[27] Taking this definition together with ground and platform it offers a range of possibilities to speculate on the nature of relationships platform forms with/within, above and below ground. Thus, a holistic approach to platform becomes possible by defining it as a deep surface that contains manifolded inter/relations.

Another approach to ground could be taken from the anthropologist Tim Ingold. In his essay, "The Earth, the Sky and the Ground in Between," in Metode's *Deep Surface*[28] issue, he dwells on two figures to draw parallels between their stand on which to comprehend the ground. One of them is James Gibson who wrote *The Ecological Approach to Visual Perception* and the other is Nan Shepherd, who wrote *The Living Mountain* in 1977. While Gibson views ground as an interface, Shepherd views it as a palimpsest. Even though, these two approaches do not seem to come together, they form a coherent frame in which the ground is revealed as a deep surface. In this sense, "[f]or Gibson, it is the ground, conceived as a solid platform of support that separates the air above from the earth below."[29] In such, solid separation, what is above and below ground is only exposed through the cracks and moments

which only allow certain instances to be revealed. Here, flatness which can be taken as one of the attributes of a surface becomes significant. Bernard Cache states that:

"In the flatness of the stage that make choreography probable, just as it is the flatness of the stadium that increases the probability of athletics. The ground plane rarefies the surface of the earth in order to allow human activities to take shape."[30]

Flatness, then, offers a possibility of different narratives to occur above ground. However, what ground accommodates cannot be limited to a flatness and what is above.

"Thus, in the land just as on parchment, the past is not buried under the present but actually closest to the surface, while the present, undercutting the past, digs deepest. The past comes up as the present goes down. This is not a layering so much as a *turning over.*"[31]

Defining ground with a metaphor of palimpsest offers a depth that embody inter/relations in different layers and scales. When defined as such, platform offers a possibility for architecture to relate to ground in multiple scales and layers such as infrastructural, environmental, social, and cultural. It is also parallel with the shift to the concept of ground as a continuous horizontal surface. This allows city's operative ground to be formed in relation to different levels and scales that define an infrastructural system.[32] Thus, in relation to an operative ground, platform can also be defined as an ecotone in ecological terms.

3. Platform: as an Ecotone
In relation to ecology, platform can possibly be redefined together with the term ecotone. When defined by ecological terms "an ecotone refers to any transitional area between two ecosystems, such as grassland and forest or forest and river edge."[33] With reference to ecological definition of ecotone Kahn states that

"As places of transition, ecotones are essentially spatial relational constructs wherein one system impacts, influences, animates change to another. As a zone of interface, an ecotone attains its specific set of ecological features by the force of interactions among the adjacent ecological systems. The distinctiveness of any one ecotone gains definition from the unique interactions between systems, rather than by traits associated with a "place in and of itself." Ecotones have dynamic qualities, altering in width and position over time, responding to changes in the environment."[34]

In this sense, it is possible to investigate platform as a dynamic interface which embodies such interactions and relations in environmental, social, cultural, and functional narratives simultaneously. Such reading offers a possibility to look further into architectural platform in relation to environmental issues. Thus, platform can be read as an ecotone. When taken as such, platform can be a dynamic edge in which networks and connections are defined. With reference to edges, Robin Dripps argues that

"In nature, edges are never thin and unambiguous, but instead thick, overlapping, and even generative. For instance, the ecotone where 'two ecosystems' combines one of the richest locations for finding a broad diversity of organisms."[35]

Furthermore, such edge has a possibility to be both a separator and a connector.[36] This inherent generativeness offers a wide range of qualities to be simultaneously defined and put forward.

Parallel to this, Chris Reed dwells on *hybrid ecologies* which puts human and nonhuman systems into dialogue. He defines *hybrid ecologies* as "strategies of conflation of social/ecological realms that reveal both their interdependence and their individuality."[37] Platform offers a possibility to become such an interface to create an interactive and responsive surface of multi-layered relationships. When taken as such, platform can form openings and produce interruptions as illustrated by Verena Andermatt Conley in "Urban Ecological Practices: Felix Guattari's *Three Ecologies*" in *Ecological Urbanism*? Producing openings and making interruptions in this sense leads to other ways of feeling, perceiving, and conceiving which in turn leads to disruption of current profit-based relations between natural, material, and cultural goods.[38] In this sense, METU Campus located in Ankara, in the capital of Turkey and its formation is a significant example to further this discussion.

3.1. METU Campus: as an Architectural Ecotone
The formation of METU campus is both socially and environmentally significant. In their article, "'A University is a society': an environmental history of the METU 'campus'," Ayşen Savaş and Güven Arif Sargın present the campus and its formation through an environmental historiography.

"It was clear from the very beginning that the environment would form a large part of the university's character; and that the created environment would accommodate the newly constructed social life."[39]

The vast land in the middle of Anatolia was environmentally transformed. This transformation also accommodated a new modern social construct.[40] METU as a 'society,' had an immense capacity to form a set of social values in relation to environmental transformation. Over the years, as a part of the main planning decision, the campus was planted with thousands of trees which are mostly pine-trees.[41] The human-made forest[42] transformed the barren landscape by appropriating the ground. In a sense, the soil was mobilized and formed a *living volume* (Fig. 1).[43] Also, as a part of the main planning decision (Fig. 2), the campus grew around the formation of the main pedestrian path, the *alley*[44] (Fig. 2).

"Through the creation of an almost three-dimensional network the alley was to regulate and to indicate where the teaching facilities and amenities had to be located. It also served to regulate over an intense landscape supported by a variety of architectural elements such as arcades to connect the facilities, pools for recreating and lawns for gathering, all of which regarded as a prerequisite for a desirable community."[45]

Thus, the *alley,* which is a primary spine that regulates the overall trans/formation of the built environment is more than just a flat surface. Taken as a platform, it is a multi-layered element that can be read as a hybrid ecology parallel to Reed's take on hybrid ecologies. It becomes an assemblage of three-dimensional relations. As a platform, it contains infrastructural elements, it continuously relates itself to the soft ground and built environment of the campus; and forms its own ecology beyond human condition.

Fig. 1
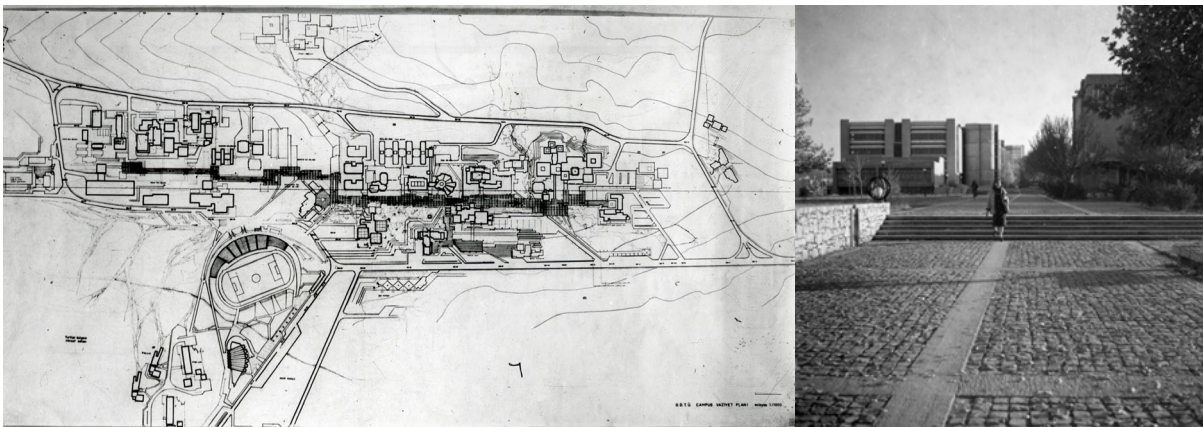
Fig. 2

At its current state the campus could be defined as a gated community. However, it is in a flux which continuously impacts and transforms its surrounding environment beyond its borders. It operates in different scales such as social, political, and environmental; and in return it is affected by outside forces and systems. It can be defined as a dynamic edge in which includes different three-dimensional networks. Constructed and planted ground of the campus itself can also be defined as a platform. It is both dynamic and porous not just environmentally but also socially. Thus, the campus can be defined

as an ecotone. In this sense, the formation of the campus can be considered as "weaving together of political and ecological structure"[46] as Dripps suggests in her article "Groundworks."

4. Concluding Remarks

Defining platform as an ecotone opens possibilities for it to construe three-dimensional networks. This text attempts to redefine it as such and draw parallels between the two terms both metaphorically and physically. Ernst Haeckel's definition of the term 'ecology' as "the science of 'the household of nature'"[47] which was also referred to in the introduction of *Relational Architectural Ecologies* is significant. The architecture of the Anthropocene, then, can be considered as 'ecological' in terms of reflecting the complexity of the relationships between what is material, cultural, social, and political.[48] In this sense, platform as a deep surface has the capacity to define complex volumetric architectural relations. Thus, the platform as an intermediary architectural element implies an intensity of relations that is formed through the modification of ground. A plural definition of ecology can be taken from Stan Allen: "Ecologies are complex assemblages of resources, species, and climates in dynamic interaction."[49] With reference to Allen's description of ecologies, the ground can be read as an embodiment of ecological relationships. Thus, an ecological reading offers a formation of exchange beyond human interaction. As an anachronical architectural element, platform forms a "ground," a pattern in which architectural knowledge is produced in relation to ecological issues. When platform is defined through an ecotone, it becomes possible to investigate platform as a dynamic interface which embodies such interactions and relations in environmental, social, cultural, and functional narratives simultaneously.

Notes

1. French plateforme – originated from Greek platús which could be translated as "flat" and Latin fõrma which is "shape, figure, from" (Online Etymology Dictionary, 2020).
2. "Platform (n.)," Online Etymology Dictionary, accessed May 29, 2023, https://www.etymonline.com/word/platform.
3. Pier Vittorio Aureli and Martino Tattara, "Platforms: Architecture and the Use of the Ground," e-Flux, Last modified 2019, https://www.e-flux.com/architecture/conditions/287876/platforms-architecture-and-the-use-of-the-ground/.
4. Ibid.
5. Ibid.
6. Ibid.
7. Ibid.
8. Ibid.
9. Ibid.
10. Jørn Utzon, "Platforms and Plateaus: Ideas of a Danish Architect," *Zodiac* 10 (1962): 113-140, 116.
11. Ibid.
12. Op. Cit.
13. Vitruvius, *Ten Books of Architecture*, trans. Morris Hicky Morgan New York: Dover Publications, 1960, 95.
14. Vincent Scully, "The Earth, the Temple, and the Gods: Greek Sacred Architecture," *Journal of the Society of Architectural Historians* 23, no. 2 (1964): 89–99, doi:10.2307/988163, 89.
15. Vincent Scully, *The Earth, the Temple, and the Gods: Greek Sacred Architecture* New York: Praeger, 1969, 6.
16. Mary B. Hollinshead, *Shaping Ceremony Monumental Steps and Greek Architecture* Madison, Wis: The University of Wisconsin Press, 2015, 82.
17. Alexander Tzonis and Phoebe Giannisi, *Classical Greek Architecture: The Construction of the Modern* Paris: Flammarion, 2004, 164.
18. Op. cit., 84.
19. Ibid., 3.
20. Ibid., 4.
21. Ibid., 81.
22. Tzonis and Giannisi, Classical Greek Architecture, 164.
23. "Surface (n.)," Online Etymology Dictionary, accessed May 29, 2023, https://www.etymonline.com/word/surface.
24. Primary definition of the word facia is "appearance, form, figure" whereas the secondary is "visage, countenance," (Online Etymology Dictionary, 2023).
25. Benjamin Blackwell, "Deep Layers of 'Flatland': Scaling up Nanomaterials," *Metode* 1 (2023): 1–19, 15.
26. Ibid.
27. Blackwell refers to anthropologist Annmarie Mol while introducing the term 'manyfoldedness'.
28. First volumen of Metode journal is shaped around the theme of *Deep Surface*
29. Tim Ingold, "The Earth, the Sky and the Ground in Between," *Metode* 1 (2023): 1–10, 3.
30. Bernard Cache, *Earth Moves the Furnishing of Territories*, trans. Anne Boyman and Michael Speaks Cambridge, Mass: The MIT Press, 1995, 25.
31. Ingold, "The Earth, the Sky," 6.
32. Ayşen Savaş et al., "Projecting the Deep Ground," *Journal of Landscape Architecture* 17, no. 3 (2022): 6–19, doi:10.1080/18626033.2022.2195224, 8.
33. Andrea Kahn, "Defining Urban Sites: Toward Ecotone-Thinking for an Urbanizing World," essay, in *Site Matters Strategies for Uncertainty through Planning and Design*, ed. Andrea Kahn and Carol J. Burns New York: Routledge, Taylor & Francis Group, 2021, 189–203, 201.
34. Ibid.
35. Robin Dripps, "Groundwork," essay, in *Site Matters Strategies for Uncertainty through Planning and Design*, ed. Andrea Kahn and Carol J. Burns New York: Routledge, Taylor & Francis Group, 2021, 76–100, 97.
36. Ibid.
37. Chris Reed, "The Agency of Ecology," essay, in *Ecological Urbanism*, ed. Mohsen Mostafavi and Gareth Doherty Zurich: Lars Muller, 2016, 328.
38. Verena Andermatt Conley, "Urban Ecological Practices: Felix Guattari's Three Ecologies," essay, in *Ecological Urbanism*, ed. Mohsen Mostafavi and Gareth Doherty Zurich: Lars Muller, 2016, 139.
39. Güven Arif Sargın and Ayşen Savaş, "'A University Is a Society': An Environmental History of the Metu 'Campus,'" *The Journal of Architecture* 21, no. 4 (2016): 602–29, doi:10.1080/13602365.2016.1192429, 617.
40. Ibid., 603
41. Ibid., 616.
42. For more expanded research on METU forest: Master's thesis by Rraja, Sara. "Gated Landscapes METU Forest and the Formation of a Topological Ground ," 2022, supervised by Prof. Dr. Ayşen Savaş.
43. Peleman et. al. in their article "Exploring the Soil: Not a Sentimental Journey," (*OASE 110*, 2022) refer to the mobilization of soil as a ground being a living thickness. With reference to this, ground as a living volume is introduced as another possibility to understand platform as a deep surface in which to illustrate the relationships it forms with/within, above and below ground.
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45. Sargın and Savaş, "'A University Is a Society'," 620.
46. Dripps, "Groundwork," 96.
47. Peg Rawes, "Introduction", in *Relational Architectural Ecologies: Architecture, nature and subjectivity* (New York: Routledge, 2013), 1.
48. Ibid., 10.
49. Stan Allen, "Artificial Ecology", in *Reading MVRDV* (Rotterdam: NAI Publishers, 2003), 87.

Image Captions

Fig. 1. Instances from METU forest (Caner Arıkboğa's archive).
Fig. 2. Left. Site plan of the METU Campus by Altuğ-Behruz Çinici. Right. An instance from the alley. (Salt Research, Altuğ-Behruz Çinici Archive).

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Biography

Zeynep Soysal is graduated from Bilkent University, Department of Architecture in 2016. She received her M.Arch degree from METU, Department of Architecture in 2019. She is currently a PhD candidate at METU and working as a research assistant at Atılım University. She participated in international conferences. She has been part of the organization committee of Archiprix Turkey competition since 2020. Her master's research has focused on the relations between architecture and urban design. Her current research interests include the relationship between architecture, ground, and ecology.

Industrial Pastoralism
Post-productive arcadias in machine-modified landscapes

Spada, Marco[1]; Molinari, Carla[2]

1. University of Suffolk, School of EAST – Engineering, Arts, Science and Technology, Ipswich, United Kingdom
2. Anglia Ruskin University, School of Engineering and the Built Environment, Chelmsford, Cambridge, United Kingdom

Abstract

The term "Industrial Pastoralism" concerns the process of industrial civilisation's acquisition of values previously attributed to the picturesque rural world, destroyed or lost in industrialisation.

In 1964, Leo Marx's 'The Machine in the Garden' describes the upheaval of the pastoral idyll as a result of industrialisation not only to the suburbs but also to the remote and pristine ecologies of the American Midwest and the prairies. Provocatively, we can observe the explosion of 19th-century pastoralism as a critical reaction to the picturesque: pastoralism warns against the dangers of modernity and invites the reader to seek a minimal and personal idyll, separated from the outside world. In the contemporary world, on the other hand, the values of knowledge and competence, of self-preservation, of rejection of the world hyper-technologization are no longer found in lonely experience (which after the pandemic has become dominant), but in the choral wisdom of the industrial world, criticised for its ecological and environmental aspects, but praised for the ethical dimension of working together.

We intend to study the relationship between the representation of the rural and the industrial environment in the processes of recovery and reuse of post-industrial landscapes. The process starts with the study of artistic representations of post-industrial society. Specifically, the study will compare pastoral paintings of XVII and XIX century (William Wyld and Hubert Robert) to contemporary photography (Edward Burtynsky and Lewis Baltz).

Through paintings and photographic representations, we will identify the transition of values and cultures towards the idea of an industrial civilisation, shifting from terms as "ruin porn" and "post-industrial" towards an Industrial Pastoralism.

This process is intended to establish a continuity between worlds hitherto represented as conflicting. Is it finally possible to find Thoreau's Walden in the Ruhr, or in the coalfields of Wales?

Key words: Pastoralism, Industrial Architecture, Picturesque, Architecture, Sustainability.

1. Introduction – Pastoral, Picturesque, Productive

See there the cottage, labour's own abode,
The pleasant doorway on the cheerful road,
The airy floor, the roof from storms secure,
The merry fireside and the shelter sure,
And, dearest charm of all, the grateful soil,
That bears its produce for the hands that toil.
Northern Star, 22 August 1846[1.]

If the unfortunate reader of the following text is an opera enthusiast, they would easily understand the meaning of this odd introduction. We are about to enter the realm of representation and conflict between images and narratives. And who better than the romantic composers to describe the major historical changes, hiding them behind melodramatic love stories? So, imagine yourself at Covent Garden, at the Opéra Garnier, or at La Scala tonight. The performance is Il Trovatore, composed by Giuseppe Verdi in 1853. Expect great choirs and epic *acuti*. The most exceptional of the choirs is that of the Gypsies ("Chi del Gitano?"), characterized by the frantic rhythm of hammers on anvils, a crescendo of industrial camaraderie[2] in 15th-century Spain. Let's make a big leap forward, and we are still at the theatre. On stage is Tosca by Giacomo Puccini, which premiered in 1900. At the beginning of the third act, before the tragedy, with the lights dimmed in the theatre, the voice of the *pastorello* (shepherd boy, "Io de' Sospiri"), an impossible-love aria, that embodies the idea of nature's indifference to human dramas, eternal in its idyllic detachment[3].

Pastoralism and Industrialization have a complicated relationship that touches on issues of identity, ecology, and culture. We want to introduce here the term "Industrial Pastoralism", an apparent oxymoron, as the keyword to describe the shift in cultures and values that led to the idea of a romantic post-industrial civilization, as well as how post-industrial societies have redefined values that were once associated with the idyllic rural world.

In Nic Clear's "The Persistence of Pastoral"[4], the author points out the two fallacies of the Neo Pastoral approach, exemplified in the opening Ceremony of the London Olympic Games in 2012; the first is related to the representation of the landscape, reimagined as a contemporary arcadia wholly detached from the reality of the modern urban landscape, the second is the representation of the "Happy and smiling peasant", a simplistic portrait of a pre-working class Briton.

This representation of the countryside is impactful because it contrasts with the negative view of the industrial past, often regarded as polluting, unfair, and deprived. However, in the pursuit of identifying an "enemy" condition, the Olympic Ceremony and other new pastoralism approaches fall into two further fallacies. The first is the recognition of industrial civilization as the historical place[5] where collective memory started to acquire political and social dignity. The second is the disappearance of mass industrialization (not only in terms of production but also in terms of politics, philosophy, and ethical values) in favour of a hyper-financialized society where the individual, rather than a group, is the leading actor. This individual can potentially survive and thrive without the emotional and mature links necessary in a complex society.

However, this faux portrayal of a Neo Pastoral idyll reinforces collective solitude rather than critiques it.

In this paper we will look, through the comparison of artwork and photography, at how the representation of rural and industrial areas in creative works has changed over time, from 17th and 19th century pastoral paintings to contemporary photographs of post-industrial landscapes. We will look at how these works represent changing values and cultural norms in post-industrial countries, and how they might help us understand the transition to Industrial Pastoralism. Furthermore, this presentation will look at how Industrial Pastoralism might help with the restoration and reuse of post-industrial landscapes.

2. Industrial Civilization and the search for a Pastoral Idyll
2.1. On the theory of Pastoralism

The pastoral idyll of the nineteenth century is an umbrella term for a movement, style and theoretical approach, grown in the laps of the picturesque[6], warning against the pitfalls of modernity and tempting the viewer to seek a minimum and personal paradise, secluded from the outside world, via the lens of artistic depiction. As industry evolved, the ideals of knowledge and competence, self-preservation, and rejection of hyper-technologization were found in the choral wisdom of the industrial world rather than in isolated experience. This has given rise to this new idea known as Industrial Pastoralism, which strives to blend rather than oppose the natural and industrial worlds, defined both as an artistic movement[7] but also as political regime characteristics[8].

The concept of pastoral tradition has long been used to illustrate the tension between the opposing forces of nature and culture in contemporary society. These two elements are inherently antithetical, and humanity has been attempting to find a synthesis between them for centuries. The quest to

reconcile the chaos of a universe where culture and imagination seem irrelevant with the Faustian urge to categorize and taxonomize reality has been a constant theme throughout human history.

The presence of the 'pastoral' as a stylistic manifestation emerges in conjunction with moments of political, economic, and social upheaval, signifying its association with times of crisis. This trend, or ideology, has its roots in the classic tradition, and is discernible in various historical instances, such as the Virgilian pastoral depicted in the Bucolics, the French Romantic pastoral that emerged towards the latter part of the 18th century, right before the Revolution, or the Victorian pastoral which emerged during a pivotal period of profound social and productive system disarray within the Empire. Furthermore, in the contemporary era, the pastoral theme continues to resurface amidst the ongoing transition from an economy primarily centred on the production of goods and services to one largely characterized by the predominance of self-sufficient and semi-sentient machines.

In modern times, starting with Alexander Pope, the first to create an architectural representation of the semi-idyllic hermitage in his own "grotto" in Twickenham[9], romantic painters and court architects sought to create an "Emotional Arcadia" that eliminated the temporal dimension[10], emphasizing the contrast between this idealized realm and the industrialized landscape that existed in its absence. The ideal Arcadia, masterfully represented by the mock village of 'Hameau de la Reine' designed for Marie Antoinette by Richard Mique in 1775-84[11] is a place where innocence, eroticism, and nature coexist, and where individuals, depicted as the ideal shepherds, live in a state of dreamy happiness while ignoring the existence of injustice, coal and steam. However, the traditional misplay of pastoralism lies in the fact that although the subject of the pastoral is ignorant of morality, culture, and tradition, it is the observer who acts as the active agent of classic pastoral realm. The observer, being aware of the moral limits of society, looks benevolently and enviously at a world where these rules are subverted, where nakedness is the natural state, and where social conventions or classes are meaningless.

Repton's Red Books provide an example of how attempts to harmonize nature and culture in a direct or pedantic manner can be awkward. As Stephen Daniel notes in his work, "Landscaping for a Manufacturer: Humphry Repton's Commission for Benjamin Gott at Armley in 1809-10," when Repton found himself working with factories on an unexpected scale and dimension, he lost contact with the multisensory reality of space[12]. In his watercolours, he "washed" the critical or conflicting aspects of architectural space, creating a sanitized image that ignored the industrial reality of the landscape.

The picturesque landscape, as defined by William Gilpin, has a divine quality that speaks directly to the observer. However, the pastoral landscape, a sub-category of the picturesque, adds a unique element. In the pastoral landscape, the human element of the shepherd mediates between the divine and human dimensions, expressing the human ambition towards a lost innocence in naïve terms. This polysemanticity adds complex narratives to the picturesque representation, activating a continuous mechanism of repulsion and interest.

The pastoral landscape was born at a time when the industrial dimension was not yet fully mature, and the factory as a building dedicated entirely to production was still a rare object. Instead, the more common system was that of the cottage-factories, where working conditions and child exploitation were more severe than factory life. The scale of the cottage/mill did not yet have the impact of the factory, but already presented the social demands of French and English social utopians. The contrast defined by the picturesque was, therefore, not between factory and nature but between industrialized society and nature, at a time when the violence of early capitalism, precisely through the cottage mills, was directed at agricultural nature and its naive and exploited inhabitants.

This idyllic – and for this reason unreal – landscape, with its emphasis on the human element, expresses a desire for a lost innocence that is threatened by the violence of early capitalism. The shepherd, representing innocent humanity, becomes a mediator between the divine and human dimensions of the observer. The pastoral landscape presents a complex interplay between the observer's aspirations towards Arcadian peace and the chaotic society of the Industrial Revolution. This interplay creates a mechanism of repulsion and interest that adds depth to the picturesque representation. Gilpin's emphasis on the divine message[13] in the picturesque landscape and the human element in the pastoral landscape presents a tension between the natural and human worlds. The pastoral landscape's prominence on the human element represents a desire for a lost innocence that is threatened by the violence of early capitalism. The pastoral landscape thus becomes a commentary on the Industrial Revolution, where the violence of early capitalism directed towards agricultural nature and its naive inhabitants threatened to destroy the innocence of humanity.

The pastoral landscape's unique polysemanticity creates a complex narrative that adds depth to the picturesque representation. The observer's aspirations towards Arcadian peace, the shepherd's representation of innocent humanity, and the violence of early capitalism create a continuous mechanism of repulsion and interest. The pastoral landscape presents a nuanced commentary on the Industrial Revolution, where the violence of early capitalism threatened to destroy the innocence of humanity.

Within pastoral painting and representation, the architectonic object assumes a fundamental role, imbued with nuanced significance. While preserving the metaphysical essence of Giorgione's

Tempest, it is the ruin itself that epitomizes the synchronicity of the pastoral message. It signifies not an idealized utopia or an idyllic existence detached from historical context, but rather the manifestation of a 'state' juxtaposed against a preceding nature.

2.2. Architecture visions of unsung utopias

In the realm of architecture, the ruin, which gained prominence with the Frontispiece to the "Essai Sur L'Architecture" by the Abbot Laugier[14] and attained popular recognition through the Neapolitan 'presepi' that ingeniously staged the Nativity of Christ amidst the remnants of Pagan Rome, assumes a dual role within the pastoral domain. On one hand, it serves as an explicit warning, cautioning against the perils of avarice and the accompanying consequences of progress. On the other hand, it possesses an esoteric nature, representing the encroachment of urbanity upon the rural idyll, serving as a lived and experiential alternative.

As noted by John Ruskin, the ruin holds significance beyond its function as a mere memento of past glory. It establishes a dynamic and active relationship, engaging in a dialogue with history and inviting the innocent community to spatially appropriate the vestiges of the past. This is particularly evident in cases such as the Tower of Calais, as highlighted by Ruskin in "Modern Painters"[15], where the civilization that constructed the now-ruined structure has dissipated, and the edifice has relinquished its original purposes of defence or representation.

In the 18th century, Hubert Robert's ruins (Fig. 1) adhered to this very logic, as elucidated by Jones and Ryu[16]. The ruin was employed with a dual purpose, portraying both its fragmented state and its inherent unity. It stands fragmented in relation to its former complete structure, while simultaneously embodying unity within the new landscape. In this context, the ruin's role amplifies and imparts significance to the notions of temporal detachment and the anthropic geography of the past, with the same action of the Neapolitan 'presepi' staged asynchronously among the Romans ruins.

Robert's portrayal of the pastoral landscape, therefore, assumes the nature of an imaginative fabrication, adhering to the conventions of classical pastoral traditions. It situates the viewer betwixt the city, which the observer deliberately averts their gaze from, and the remnants of previous civilizations, now assimilated into the rural expanse. Robert's Agricultural Ruin encounters a stylistic reversal through the brushwork of William Wyld in his work "Manchester from Kersal Moor, with rustic figures and goats" (Fig.2) currently held by the Royal Collection Trust. Executed following Queen Victoria's 1851 visit to Manchester, a visit historically associated with her reputed remark, "in the midst of so much wealth, there seems to be nothing but chimneys, flaming furnaces... with wretched cottages around them."[17], Wyld undertakes a departure from the moralizing tendencies of the preceding era, crafting a masterpiece that embodies Victorian ethics. In this rendition, the observer no longer represents an intellectual seeking refuge from the corrupt city in the solace of the countryside— a symbolically apparent presence of God. Instead, the observer materializes as a traveller arriving in the city from the rural realms, yet to encounter the plight of working-class neighbourhoods, suffering, and injustice. Positioned atop the privileged vantage point of Kersal Moor in Salford, the observer beholds the foregrounded scene of a 'romantically Arcadian' nature, thus displacing the sublime spectacle of the industrial city to the background.

Fig.1

Fig. 2

In "Victorian Visions of Suburban Utopia", the author posits that the selection of Kersal Moor carries not only stylistic implications but also political connotations. The site had been witness to significant workers' mass demonstrations, including the Chartist Rally of 1838, and as such, it might have assumed a critical undertone towards the exploitative politics of the time. The unresolved tension between the idyllic countryside, home to contented English commoners who were forcefully uprooted from their lands, and the rapacious city driven by capitalistic consumption finds expression in this artwork, in the author's words: "… there was unresolved business between the Edenic countryside and the Satanic Mills – between the common, happy Englishman who were being ripped from the land and the capitalistic city that voraciously consumed them."

With this painting, the pastoral sensibility definitively sheds its paternalistic, puritanical, and moralizing traits, culminating in its metamorphosis into a mature socio-political manifesto. God is finally excluded from the equation, and the shepherd has irrevocably left Pope's Grotto to join the rally.

3. Landscapes of Decay and Dereliction
3.1. Between Arcadia and Stahlstadt – the Ideal Industrial Landscape

The previous analysis, though, reveals that beyond the immediate aesthetic and stylistic considerations of the pastoral approach, exists a series of nuanced aspects that are less obvious compared to the classical message of pastoral representation. This is particularly evident in English, Italian, and French pastoral traditions, as defined by Alexander Pope in the 17th century. Two key points emerge upon closer examination. Firstly, the notion of a golden age characterized by a bountiful earth that provides the necessities for a happy existence. Secondly, the constant dialogue between an innocent (yet not naive) participant and the boundless dimensions of the Universe. Giacomo Leopardi vividly portrays this dialogue in his *Canto notturno di un pastore errante dell'Asia* (the least pastoral of Leopardi's pastoral poems)[18], where the exchange is unidirectional, and the shepherd is acutely aware of his mortal, finite, and inherently unhappy nature.

Even working in harmony with nature, which should ideally bring joy and satisfaction in a life aligned with the divine plan, devolves into monotonous servitude, a state of dependency on the whims of a harsh environment, resembling a confining prison that one yearns to escape. It is within this context that we can reinterpret the lament of the Bukhara shepherd. While rural seclusion does allow for meditation and contemplation of the divine plan, it also condemns individuals to solitude, tradition, and the stifling of ambition and intellectual pursuits.

Herein lies the pastoral trap, a construct that emerged during the Industrial Revolution to caution against the perils of modernity. However, it fails to acknowledge the changing ethical landscape. As François Roche[19] astutely observes, it simultaneously promotes a "post-puritanical capitalism" by commodifying both local and global aspects while denying or feigning ignorance towards the emergence of new communitarian values associated with the industrial experience. These values include the interdependence of workers, which emphasizes collaboration, solidarity, and respect for individuals involved in production, recognizing the fundamental role each person plays in the assembly line. Additionally, these values emphasize the worth of an individual irrespective of their initial social condition or status.

Released from moralistic or formal constraints, pastoral aesthetics are deeply intertwined with the ethics of work, albeit with constructs and dichotomies that are not always explicitly articulated. While the solitude/mutual support relationship readily constructs a narrative illustrating the connection

between pastoral vision and labour, other, less immediate considerations contribute to framing the concept of Post- Industrial Pastoralism within a philosophical perspective.

Within the medieval theological perspective, the concept of a philosophy of work is determined by the relationship between nature intrinsically linked to divine creation. This links the shepherd (symbolizing the generic labourer in the fields, as opposed to the aristocratic warrior) to the whims of the seasons, fluctuations in temperature, and the consistent forces of climate. However, when the perspective shifts and God is replaced by production, which remains constant over time regardless of rain, snow, or sunshine, the philosophical perspective shifts to the individual. In this context, we can discern the difference between the exclusionist views of Locke and the Catholic perspective of Pope. Both acknowledge the dehumanizing and alienating trajectory of modernity, yet whereas Locke views it as a necessary consequence of a society in the process of settling, Pope sees it as a symptom of humanity's betrayal of God[20].

An aporia emerges when contemplating the contrasting concepts of the pastoral past and the industrial present. On one hand, the pastoral past is idealized as a beautiful and harmonious existence, also if it reveals an intrinsic unfairness, as it suppresses human agency and subjugates individual will to the predetermined structures and norms of a theocentric society. On the other hand, the industrial present is viewed positively for its capacity to bring people together, foster interconnectedness, and advance human progress, but it is not without its shortcomings; generates class conflicts, social inequalities, and systemic violence, as power dynamics and economic disparities become increasingly pronounced within industrialized societies. In this aporia, the challenge of reconciling the idealized beauty of the pastoral past with its inherent limitations on individual freedom, while also grappling with the recognition of the positive aspects of the industrial present alongside its associated social conflicts and violence raises profound questions about the trade-offs between societal progress and human well-being, leaving at the observer the responsibility of an unfair choice.

In this sense, we can delve deeper and establish a more nuanced understanding of the concept of Industrial Pastoralism, particularly in relation to the values embedded within industrial civilization. These values encompass notions of solidarity and collective endeavour towards progress, which are often portrayed as inevitable, positive, and laden with promises of a better future. However, it is important to acknowledge a notable exception to this prevailing narrative, exemplified by Jules Verne's Stahlstadt, where the 'city of steel' becomes entangled with overt racism and Prussian militarism[21]. The conventional representation of this progress finds expression in postcard imagery, characterized by picturesque watercolour illustrations showcasing factories from a bird's-eye perspective, accentuating a sense of optimism and upliftment. Yet, within this context, certain artists sought to challenge the axonometric aesthetics of industrialization, with notable examples including Mario Sironi in Italy and L. S. Lowry in the United Kingdom.

3.2. Images of Dereliction, Post-Industrialism and Critical Picturesque

It was not until after the Second World War that the portrayal of factories shifted from merely alienating spaces to distinctly unsettling and hazardous. This transformation can be witnessed in Michelangelo Antonioni's 1964 film 'Il Deserto Rosso' (The Red Desert), wherein the factory assumes a prominent role as a silent perpetrator of the erosion of personal narratives and a contaminating force upon individual consciousness. However, a pivotal moment in the re-evaluation of the industrial landscape came in 1975 with the seminal photographic exhibition titled 'New Topographics: Photographs of a Man-Altered Landscape,' curated by William Jenkins at the George Eastman House in Rochester, New York. This exhibition showcased works by photographers such as Lewis Baltz, Robert Adams, Bernd and Hilla Becher, Joe Deal, Frank Gohlke, Nicholas Nixon, John Schott, Stephen Shore, and Henry Wessel. These photographers captured images that documented the profound transformations brought about by human intervention in the landscape, reflecting a shift towards a critical examination of the industrialized world and its impact on both the physical environment and human experience[22]. The exhibition confronted the then-romanticized notion of the American Landscape, by capturing the impact of human intervention on the land. The photographs featured in the exhibition depict scenes of suburban development, industrial sites, and mundane urban structures, highlighting the profound alterations humans have made to the landscape. This subversion of the pastoral ideal disrupts the notion of a harmonious coexistence between humans and nature, revealing the complex and often dissonant relationship between them, but also the fascinating beauty of a banal domesticity of consumption and land-exploitation.

In "Park City," Baltz documents the rapid development and transformation of a once-pristine natural setting into a sprawling suburban community. The series portrays the relentless expansion of housing developments, revealing the impact of human intervention on the landscape. Baltz's photographs depict a flat land, defined by man-made mountains of debris and construction materials, a landscape of temporary promises, between a natural state and a profit-oriented real estate development. In this suspended time a sense of order contradicts the inorganic spirit of the easy-criticisable hyper-building of the suburbs.

Baltz's artistic representation of the residential and industrial landscape (Fig.3) subverts the traditional pastoral order, where the ruin is no longer an abandoned human element embraced by nature's triumph. Instead, the landscape is dominated by walls, parking lots, and infrastructures. The natural ruin, whether a tree or a bush, simultaneously proclaims its fragmentary existence within a human-altered landscape while celebrating its integrity as a vital component for the reestablishment of the disrupted relationship between humanity and nature, a connection ruptured by the violence of architecture[23].

On the opposite end of the spectrum, but still aligned with the critique of the reckless exploitation of the environment, we find Edward Burtynsky's 'Shipbreaking' series. Through this collection of large-format photographs, the Canadian photographer examines the impact on the landscape resulting from the policy of dismantling large single-hulled ships following the Exxon Valdez disaster in 1984. These old and unusable ships, decommissioned in Bangladesh, give rise to anthropic monuments that, similar to Baltz's mountains of debris, redefine the landscape. They form a tragic, tangible, immense, temporary, and thus mutable representation of the post-industrial landscape[24]. As always, these interpretations do not offer a singular perspective on the phenomena at hand. On one hand, the rust, oil, and decaying steel of the ships define a landscape of decadence and neglect. On the other hand, the presence of these post-industrial corpses implies (as previously mentioned through their absence) the existence of other, safer, more technologically advanced, and ostensibly environmentally friendly giants of the sea.

Fig. 3

Fig. 4

Similar to the picturesque landscape, Burtynsky's portrayal can be described as a 'residual' landscape, distinct from the 'primary' landscape. However, this residual landscape metonymically encapsulates all the contradictions of post-industrialization, ranging from the juxtaposition of cottages and factories in Georgian Yorkshire to the sprawling micro-component gigafactories in Shenzhen. Burtynsky has perhaps captured not only the global scale of industrialization, particularly in China, but has also managed to cultivate a neo-pastoral dimension in which the message deliberately remains ambiguous. This deliberate ambiguity allows the narrative to simultaneously evoke admiration for the captivating power of the landscape's colours and shapes, shaped by the capricious and monumental human divinity, while also conveying the imminent risk of systematic violence against nature. Burtynsky's pastoral thus serves as a twofold provocation: firstly, to apprehend the sublime wonder of human-altered space, and secondly (although the second level is increasingly implicit), to serve as a stern admonition against indulging in hypocritical ecological sub utopias or moralistic greenwashing[25].

4. Conclusions – Ethic and Aesthetic of the Post-Industrial Pastoralism

The internal ambiguity inherent in pastoralism has now reached a dimension, within contemporary post-humanist contexts, that extends beyond mere stylistic considerations and delves into the crisis of contemporary ethics regarding space, community, and the broader notion of coexistence. Post-Industrial Pastoralism, similar to classical pastoralism and Industrial Pastoralism as previously defined, can be interpreted in two contrasting ways. The first interpretation leans towards moralization, aesthetics, or style, while the second interpretation serves as an urgent call to reimagine a different relationship with a nature inherently intertwined with all living beings, not necessarily limited to the human realm. This perspective, as described by Nic Clear in the cited article, encompasses the acknowledgment of a world continually shaped by intra-actions that demand an expansion of our understanding of social relationships.

Within the realm of this productive landscape, where the God of seasons and the wandering shepherd, as well as the figures of factory owners or workers, have been lost, what remains is a space devoid of individuals. Here, machines operate in self-sufficiency, and vast logistic centres exist as spaces of human exclusion, fully automated and autonomous. In these spaces where humans are merely "guests," the perilous beauty of the Anthropocene has given rise to a new aesthetic of the pastoral landscape. Instead of Claude's mirror reflecting the shepherd's flute, the contemporary mirror is represented by the screen of a mobile phone, the window of a high-speed train connecting Rome to Paris in nine hours, or the rear-view mirror of an Amazon delivery van—objects in constant motion. The fixed focus of pastoral representation has shifted from the shepherd's flute to a landscape distorted by speed, where the remnants of modernity's factories serve as memorials to a civilization that, although surpassed, managed to create fairer and more equitable working conditions at the expense of pollution, climate change, and the dehumanization of production and the surrounding environment, as for instance in the contemporary visions by Jenny Odell (Fig.5) in Satellite Landscapes (2014).

Fig. 5

In the condition of Industrial Pastoralism, aesthetics adapt to the posthuman world, not in the traditional sense of a space where humans coexist with unexpected forms of life, but rather a space that remains indifferent to the human condition—a landscape engaged in dialogue no longer with the melancholic observer of industrialization, but with a polysemantic philosophy where production and consumption become intertwined actions.

The intricate nature of the term under examination presents a complex realm for exploration within the scope of this conference. This term exists in a state of suspension, entangled within various strands including tradition, political power, style, and deliberate ambiguity. The inclusion of the prefix "industrial" further complicates the task of elucidating the precise extent and limitations of the subject matter. Instead, it introduces an additional dimension encompassing the domains of production, communities, and the potentially perilous realm of sublime experiences. As previously discussed, during this period of value crisis and institutional upheaval, pastoralism serves a dual purpose of both caution and prediction. Post-industrial civilization finds itself in the throes of late-imperial decline, amidst emerging philosophies such as post-humanism, ecocentrism, and cosmocentrism, swirling amidst the ruins of LEED Platinum-certified buildings and vertical forests exportable from Milan to China, allowing the affluent to possess a slice of landscape on their balconies for a domestic micro-pastoral experience. Meanwhile, gigafactories have become completely dehumanized, acting as creators of algorithms that are then utilized by other machines.

Just as the New Zealander in Gustave Doré's "London: A Pilgrimage," arriving from a distant corner of the world, or the sleeper in H.G. Wells' "When the Sleeper Wakes," arriving from a different time, observed the ruins of London symbolizing industrial civilization collapsing at its peak, we can easily envision our own ambitious and complacent architectural civilization lying in ruins.

Perhaps, as the wandering shepherd from Asia continues his eternal journey in dialogue with the moon, he will find himself standing before the ruins of NEOM The Line — a desert enclave for influencers and crypto-bankers — and wonder how on earth to get across.

Notes

1. Ernest Charles Jones, poet and social innovator, wrote this poem on *Northern Star*, a Chartist newspaper, to celebrate the creation of O'Connorsville, an utopia based on chartist ideals advocated by the Irish movement leader Feargus O'Connor.
2. In his review to Jona et al., Gavin Williams, "Emilio Jona, Sergio Liberovici, Franco Castelli, and Alberto Lovatto: Le Ciminiere Non Fanno Piu Fumo: Canti E Memorie Degli Operai Torinesi," *The Opera Quarterly* 29, no. 1 (Mar 01, 2013): 80-85., notes a long tradition of chants and arias in Trovatore related to the productive industrial realm. Not only Chi del Gitano?, though, but also, Se mi si strappa il filo can be considered part of a cottage-industry society, criticized by the Italian composer.
3. The topic of pastoralism as metaphor of the imminent death of Tosca, Scarpia and Cavaradossi, is explored in Theodore Gentry, "Musical Symbols of Death in Tosca," *The Opera Quarterly* 14, no. 4 (1998): 59. For a more comprehensive study on pastoralism in music, see Huang Lei, "Pastoral in Music: Ontogenesis and Semantics of the Genre - Key Performance," ." European Journal of Arts no. 3 (2021): 79-85.
4. The essay by Nic Clear, "The Persistence of the Pastoral," *Architectural Design* 83, no. 3 (2013): 86-93 covers different aspects of the Pastoralism, and it's part of a broader publication in a special edition of AD titled "*The New Pastoralism: Landscape Into Architecture*".
5. We refer here to the definition of *Places of Memory* given by Pierre Nora, "Between Memory and History: Les Lieux De Mémoire," *Representations* 26, (1989): 7-24
6. The reference to the picturesque is still debated, especially if we consider the Pastoral a style, or approach, and the Picturesque a compositive method. In John Lark Bryant, "A Usuable Pastoralism: Leo Marx's Method in the Machine in the Garden*," Mid-America American Studies Association* 16, no. 1 (1975): 63-72., appears clear the relation between Leo Marx's idea of a critique American Pastoralism, in which the methodology of investigation is not only a generic study on literature, but – using Henry Nash Smith's words – "an interplay between social facts and aesthetic values."
7. See: Leo Marx, *The Machine in the Garden: Technology and the Pastoral Ideal in America* (Oxford: Oxford University Press, 1967), Mark Frost, "Journeys through Nature: Dickens, Anti-Pastoralism and the Country." In *Dickensian Landscapes*, ed. Marie-Amélie Coste, Christine Huguet, Nathalie Vanfasse, *Dickensian Landscapes*, (Grenoble: Centre d'Etudes sur les Modes de la Représentation Anglophone, 2016), 53-71, and John Ruskin, *Art and Life* (JB Alden, 1900).
8. Foucault's case is quite interesting, because links the term "Pastoral" in the sense of responsibility for the growth and wellbeing of a subject by an upper authority, and the "Pastoral" in the sense of the recognition of such authority as defined by the skills and knowledge of a rural tradition, packed with heired wisdom. See: Michel Foucault,. "The Subject and Power." *Critical Inquiry* 8, no. 4 (1982): 777-795.
9. See: Anthony Beckles Willson, "Alexander Pope's Grotto in Twickenham." *Garden History* 26, no. 1 (1998): 31-59.
10. This Emotional Arcadia is often delusional, and should not be simplistically intended as a rapture in a idyllic world. As stated in Tonette L. Bond, "Pastoral Transformations in" Barren Ground"." *The Mississippi Quarterly* 32, no. 4 (1979): 565-576, the Emotional Arcadia of Southern United States is a false idyl destined to shatter.
11. An extraordinary book on this topic is the one by Martin, Meredith. *Dairy Queens: The Politics of Pastoral Architecture from Catherine De'Medici to Marie-Antoinette.* (Harvard: Harvard University Press, 2011), in which the architectural, urban and metaphorical features of the faux villages is rigorously explored.
12. A part from the cited article in Stephen Daniels, "Landscaping for a Manufacturer: Humphry Repton's Commission for Benjamin Gott at Armley in 1809-10." *Journal of Historical Geography* 7, no. 4 (1981): 379-396. Is it worth to be noted, by the same author the comprehensive biography of Repton, Stephe Daniels, *Humphry Repton: Landscape Gardening and the Geography of Georgian England* (New Haven: Yale University Press, 1999).
13. A comprehensive study on William Gilpin, *Three Essays: On Picturesque Beauty; on Picturesque Travel; and on Sketching Landscape: To which is Added a Poem, on Landscape Painting* (London: R. Blamire, 1794) can be found in Robert Mayhew, "William Gilpin and the Latitudinarian Picturesque." *Eighteenth-Century Studies* 33, no. 3 (2000): 349-366.
14. The extraordinary engraving of the frontispiece to Marc Antoine Laugier, *Essai Sur L'Architecture*. Paris: Jombert, 1755 by Charles-Dominique-Joseph Eisen has been widely analysed, most recently in Rebecca Williamson, "Other Lives: Charles Eisen and Laugier's Essai Sur L'architecture." *Drawing Matter*, December 26, 2019, https://drawingmatter.org/other-lives-charles-eisen-and-laugiers-essai-sur-larchitecture/.
15. See John Ruskin, *Modern Painters. Vol. 4* (G. Allen, 1856).
16. See Nathaniel B. Jones and Sara Ryu, "Distance and Proximity in Hubert Robert." *Classical Receptions Journal* 11, no. 4 (2019): 476-507.
17. The quote is taken from Nathaniel Robert Walker. *Victorian Visions of Suburban Utopia: Abandoning Babylon* (Oxford: Oxford University Press, 2020).
18. One of the strangest poems by Leopardi, edited in a critical edition as Giacom Leopardi and Alessandro Coletti. *Canto Notturno Di Un Pastore Errante Dell'Asia* (Ed. AC, 1983), does not follow the classical schemes adopted by the author for the other pastoral poems, but instead focus the attention on the desperate condition of the natural state of mankind, and its frustrated ambitions. For further details see Zane Mackin, "Rewilding Arcadia: Pastoral and Leopardi's Search for the Natural." *Quadrante* no. 21 (2019): 231-247.
19. See François Roche, "Next‐Door Instructions." *Architectural Design* 83, no. 3 (2013): 126-133.
20. This topic has been explored in Courtney Weiss Smith, "Political Individuals and Providential Nature in Locke and Pope." *Studies in English Literature, 1500-1900* (2012): 609-629.
21. A thorough analysis on Verne's viewpoint on ecocriticism and militarism can be found in Heather I. Sullivan, "Dirty Nature: Ecocriticism and Tales of Extraction-Mining and Solar Power-in Goethe, Hoffmann, Verne, and Eschbach." *Colloquia Germanica* 44, no. 2 (2011):111-131.
22. A contemporary criticism to the 1975 Exhibition is present in Greg Foster-Rice and John Rohrbach. *Reframing the New Topographics*. Chicago: University of Chicago Press, 2010.
23. This part on Lewis Baltz's work is based on two pivotal works: Louis Baltz and Lewis Baltz, "The Raft of the Medusa: American Photography in the 1980'S." *Revue Française D'Études Américaines*, no. 39 (1989): 71-83, and Susan H. West, "Lewis Baltz: Discovering Park City." (Master diss., The City University of New York, New York 2016), https://academicworks.cuny.edu/..
24. See Andriko Lozowy, "Picturing Industrial Landscapes." *Space and Culture* 17, no. 4 (2014): 388-397.
25. The three main sources for this paragraph are: Craig Campbell, "Residual Landscapes and the Everyday: An Interview with Edward Burtynsky." *Space and Culture* 11, no. 1 (2008): 39-50, Joshua Schuster, "Between Manufacturing and Landscapes: Edward Burtynsky and the Photography of Ecology." *Photography and Culture* 6, no. 2 (2013): 193-212, and Pritchard, Sara B. "Dangerous Beauty: Aesthetics, Politics, and Power in Anthropocene: The Human Epoch." Environmental History 25, no. 2 (2020): 377-382.

Image Captions
Fig. 1. Hubert Robert (c.1770). *Stair and Fountain in the Park of a Roman Villa*. Los Angeles County Museum of Art, Gift of the Ahmanson Foundation.

Fig. 2. William Wyld (1852). *Manchester from Kersal Moor*. Royal Collection Trust / (c) HM Queen Elizabeth II 2012.
Fig. 3. Lewis Baltz (1977). South Wall, Semicoa, 333 McCormick, Costa Mesa, from *The New Industrial Parks near Irvine, California*.
Fig. 4. Edward Burtynsky (2000), *Shipbreaking No. 8, Chittagong, Bangladesh*. Artist's online website.
Fig. 5. Jenny Odell (2013-2014). *Satellite Landscape*. Artist's online website.

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Biography
Marco Spada is an Architect (PhD, ARB, SFHEA) and Senior Lecturer in Architecture at the University of Suffolk. He earned his PhD in 2016 from Sapienza University of Rome with a thesis on the relationship between memory and design in the rehabilitation of industrial plants. Marco specializes in urban narrative and complex sustainability, having studied at Roma Tre University, the University of Liverpool, and the Gdańsk University of Technology. He carried out research activities in Rome, Tuscany, Poland, Kenya and the UK. Specialized in urban narrativity, sustainability and circular economy, he worked in Milan as Project Manager and Design Consultant. Last year, Marco has also obtained an EU Horizon Grant to study the impact of steel mills on local communities. Thanks to this funding, he was able to conduct field research, exploring how the steel industry has influenced the urban development of some cities in the UK and analysing the relationship between industrial plants and the local communities.
Carla Molinari is Senior Lecturer in Architecture and BA Course Leader at the Anglia Ruskin University. She teaches architectural history and theory, and Design Studio. Carla has a PhD in Theory and Criticism of Architecture, and has published on cinema and architecture, on the conception of architectural space, and on cultural regeneration. Before joining ARU in 2022, she taught at Leeds Beckett University, University of Gloucestershire, University of Liverpool, and University Sapienza of Rome. In 2020 she has been awarded a Paul Mellon Research Grant for her archival research on Gordon Cullen and in 2016, she was awarded a British Academy Fellowship by the Accademia Nazionale dei Lincei for her research on Peter Greenaway and Sergei Eisenstein. Carla's research engages with architecture and media, innovative interpretations of montage and cinematic design methods, theory and history of space, and urban narrative strategies.

The border that becomes a frontier
A new way to inhabit the edge

Valchera, Flaminia
Architect, graduated from Roma Tre University, Department of Architecture, Rome, Italy

Abstract

In the last four decades our society has discussed the topic of borders: since 1985 Europe has tried to abolish all frontiers controls in the name of a globalization that has in fact deleted the borders and multiplied the walls with the others. But is it necessary to completely abolish all borders? The answer is that it is essential to critically think about the semantic value of the word border to understand how this term has culturally defined our way to intend territoriality and social relationships with otherness over time, and to overcome the now rooted supremacy of conflictuality over cooperation.
Understanding how and why some languages have maintained a distinction on a semantic level between the concept of border and frontier is interesting to change our approach (Zanini, 1997). In the cultures in which these terms have a different meaning, the border embodies the spatial role of separator between contiguous territories, while the frontier is intended as the limes that Latin culture attributed to the separation between the known and the unknown, that is the last limit beyond which it is insidious – but also interesting, in some ways – to go (Ferraro, 2001). As such, if the border is a geographically defined line that establishes the right of ownership, the frontier is a strip of land that constantly mutates according to the cultural interaction between two or more parts.
We can start from this concept to create a universal interpretation of border that could target the actual meaning of frontier: if borders were intended as a space of possibility and not as a line, it would be possible to conceive the geographical borders – absolutely necessary in our time (Cacciari, 2000) – as a common ground to found the cohabitation of two or more cultures by leveraging the features they share.

Key words: border, frontier, line, space, otherness.

1. Statistics and consequences of spatial fragmentation in the contemporary world

The topic of borders and the land/sea divide has become, especially in recent years, a highly topical issue due to the media debate triggered by migration flows. Considering the data reported by the *Atlante delle frontiere*[1] published in 2018, there are 323 land borders in the world which, added to the maritime ones, reach about 750 for a total extension of 250˙000 km. It is also necessary to elaborate on this figure by specifying that the so-called "natural borders" count for 55% - of which 30% are hydro-geographical elements and 25% are orographical elements - of the total, while 45% identify "artificial borders", the actual broken straight lines such as those found in the United States and North Africa. Although the literature has disproved the notion of a "natural border", ascertaining that this is a concept developed only in the 19th century so that Man's separating action could find a respectable justification[2], these statistics help us to understand how the course of history has always tended towards a global fragmentation towards which, since 1985, on the wave of that globalising sentiment theorised by Bauman[3], Europe has tried to promote, at least for the territories that fall within it, a reversal of course with the introduction of the Schengen Area. However, at a macroscopic level, the ease of moving around avoiding the customs controls of yesteryear has not mitigated the atavistic hostilities derived from the ancient border demarcation and, over time, the controversial concepts of *inside* and *outside*, which have also had repercussions at a microscopic level, have become entrenched in common perception. Indeed, investigating at the local level, where the concept of borders has fuelled hostility to otherness, we have seen the emergence and development of gated communities in which people seek to preserve their identity from the threat of the other who, lacking the social conditions to be able to exclude others, suffers the phenomenon of ghettoisation[4]. Dwelling, however, on the urban sphere, it is necessary to note that borders have also inevitably created hybrid territorial belts in peripheral areas close to the drawn boundaries in which cultures, religions, and languages do not correspond perfectly to the more or less homogeneous pattern found in the core zone of each country. In this sense, it is worth mentioning two experiences that clarify the complex definition of the identity of two cultures that are engendered by the border. The first example is effectively represented by the community of people living on the Karst plateau who have chosen to call themselves *zamejci*[5]: this group is made up of the Slovene minority present in Italy, Austria, Hungary and Croatia, and tells of a linguistic modification deriving from their geographical location, whereby the spoken language moves away from the Slovene of Ljubljana and is made up of words that are the result of the sloveneisation of Italian words. This linguistic modification leads them to be recognised as Slovenes by Italians but also as Italians by Slovenes, placing them at the centre of a debate that constantly forces them to redefine their identity parameters. A similar discourse is linked to the culture of the *chicanos*[6], that is, those who reside in the United States despite being of Mexican descent: it is difficult for them to make themselves understood because the language they speak, a mixture of Spanish and English, is as distant from their mother tongue as it is from that of the country in which they live and work. For them, the linguistic change translates into the impossibility of communicating effectively with the Americans and, simultaneously, represents the cutting of the umbilical cord with their homeland.

1.1 Interpretative hypotheses and purpose of the investigation

While both examples bring to light collective experiences that evoke painful memories of wars for sovereignty and territorial dominance in the political sphere, they also tangibly demonstrate how spatial divisions have failed to translate into the desired preservation of the actors' identity. On the contrary, in fact, the borders themselves have generated new realities that live in marginal spaces redefining their connotations starting from the mixture of traditional elements and elements proper to the destination land. These communities, and consequently the territorial belts they inhabit, have been able to break down the dividing line, giving rise to cultures that are not recognisable within a clear territorial perimeter. Experiences of this kind can then be conceived as potential social connectors capable of breaking down the atavistic hostility that has historically been a direct consequence of border policies through the development of a new way of understanding the word border that can reshape itself by tending towards the concept of fluidity inherent in these realities that inhabit marginality. From all these considerations then emerges an urgency that is to understand how to linguistically redefine the concept of border by analysing how this term is sometimes, in some languages, synonymous with *frontier*: this helps, on the one hand, to explain the historical vision that countries have absorbed regarding the relationship with otherness and, at the same time, provides the tools to rethink the border as a limit that is no longer immobile but open to the possibility of continually reformulating itself. In this way, the more static and divisive conception of borders that persists in the tradition of some cultures would be abandoned in order to promote a collaborative approach that does not distort the identity of the parties involved – as Maria Lai, who founded her entire artistic oeuvre on stitching, states in an interview[7] – but is capable of founding a common ground on which to recognise and enhance the mutual and shared cultural heritage.

2. The origin of the border: the Roman *limes*

In order to understand how current linguistic differences conceive the concept of the border, it is necessary to analyse its origin and how it came into being and paved the way for the now familiar sense of understanding the margins. In the ancient writings of Strabo and Aristides, one can read the idea that the perimeter itself defined the interior of the Roman Empire as the set of places worth knowing and possessing[8]. From this point of view, it is interesting to note that with Hadrian, under whom the empire had reached its maximum extension, the limes was identified as the clear separation between the barbarians and the Romans, both in the East and in the West. However, at the same time, the journeys that the emperor himself undertook along the borders of the empire did not only have military purposes: Hadrian seems to have been so intrigued by the places and their diversity that he wanted to experience them firsthand to the extent that he wanted to recreate, through imitations, an evocation of these journeys within his Villa at Tivoli, which thus became a collector's treasure chest. It is evident, then, how that semantic component that recognises the *limes* traced by the Roman priest as a propeller of interest has disappeared, while that ancient meaning of the term that sanctioned the separation of the sacred place (the empire) from the unknown dominated by the laws of Chaos and perennially identified as a threat of siege and, therefore, of death, has been maintained. There then, far from the centre and close to the space towards which it is not interesting to venture - due to a supposed banality of content and potential danger to safety – contemporary society tends to place that which diverges from the safe centripetal homogeneity of sacred space. Foucault theorises this idea in his definition of *deviant heterotropies*[9]: the place inhabited by individuals whose behaviour appears deviant from the average. By virtue of its nature, then, the foreigner is historically kept at the margins – of a state or a city, if one thinks of the suburbs – since he comes from the confused and threatening outside, bringing with him ways of inhabiting the world that are different from those most shared within a space and capable of disturbing the stability of the norm. Hence the need to understand how language has engulfed, translated and expressed the concept of limes in new forms, shaping the way of considering otherness in various cultures.

2.1 Linguistic comparisons: *border* and *frontier*

Starting from the common Latin root, some languages have developed the concept of *limes*, sometimes translating it as *border* and at other times as *frontier*. However, this semantic distinction does not occur in all languages: in some cases, again for historical reasons, a single term is used to indicate the concept of limit, introducing a synonymy between *border* and *frontier*. The Italian language has evolved from Latin by maturing a semantic difference between the two words: *confine* (border)[10] denoted the line that defines the right of ownership and sovereignty over the territory delimited by it. In some way, therefore, the border still carries with it that ancient nuance of meaning relating to military conquest inherent in the philosophy of the ancient empire, which transfers to the word *border* a sense of immovability and thus of certainty and stability. On the other hand, it was necessary in the Italian language to attribute to the term *frontiera* (frontier)[11] the other nuance of meaning of *limes* relating to the uncertainty and fear of confronting an unknown world: the frontier, by etymology, contains within it the word *fronte* (front) and transfers the sense of turning towards something or someone – so much so that thaey say "fronteggiare il nemico" (to face the enemy). Thus having no geographical or political reasons, the frontier is a limit set at a cultural level – so much so that in Italian, by extension, the concept of frontier is used to speak of languages, customs or traditions. Because of its nature, then, the frontier does not represent a line fixed to the ground but a fringed territorial strip that allows the possibility of continual reformulation according to the socio-cultural changes of the peoples it involves. Also, the difference between *border/boundary* and *frontier* is maintained in English, as well as in Italian and many Slavic languages. Not all languages, however, adopt this same choice. In French, despite the same Latin root, the two terms converge in the expression *frontière*, probably because when France reached the maximum limits of expansion, it was no longer deemed necessary to maintain a term with the exclusive political-military meaning. The same happens with the German word *Grenze*, which means both abovementioned concepts. However, the term *Mark* – used with the same meaning as *confine* in Italian – survived until the middle of the 18th century as it was more useful for discussions between the knights of the Teutonic order and the Polish princes to discuss questions of territorial dominion[12]. Moving away from Europe, it is also worth mentioning the case of the Americans who are more attached to the concept of the frontier because, as Turner[13] explains, it is the frontier that has connoted the proverbial charisma they claim to possess. On the contrary, it is the case in China where the concept of limit was born in parallel with that of limes - adopting its most unfavourable meaning - and has remained the same throughout time: for the Chinese, in fact, the Great Wall established the border between the infallible imperial system and the formless space inhabited by wild nomads[14].

2.2 Edge and identity

Beyond the strictly lexical contemporary issues – to which we will return later – there is no doubt that the limit, as the Latin etymon suggests, is a spatial device that inevitably puts us in relation with the other. This confrontation is very often of a rejecting nature since, in the multiplication of the world's complexity, every exposure to the outside imposes to question the inside. In times of global crisis, this turns into an attitude of closure aimed at protecting one's identity. A repeated process of this kind has led to the numbers mentioned above. A repeated process of this kind has led to the numbers mentioned above. The ones who pay the price for this repulsion are the migrant peoples, who bounce from one place to another because they are removed from any country that perceives them as a threat, fuelling a feeling of hostility on both sides. This social short-circuit does not consider, because perhaps it has forgotten, that the identity one aims to preserve is, to all intents and purposes, the product of confrontation with the other. Luca Gaeta, in fact, proposes the reading of limits as places where the relationship between us and others occurs. It is a comparison that highlights an inescapable dependence between the two parties whereby their respective identities are indebted to each other since it is only through a mutual exchange that, paradoxically, they determine each other[15]. Looking at the concept of identity from this point of view, one can say that it is not an incontrovertible datum but is something that undergoes the changes of time. Bauman tries to explain this phenomenon by making a comparison with the puzzle mechanism[16]: this presupposes that the game of selecting the pieces is oriented towards the replication of an established image; on the contrary, the construction of identity does not know at the outset what the final objective is, but tries to select and discard pieces, which are gradually acquired, on the basis of what seems more or less deserving of being possessed and then tries to find a reasonable connection between them all. One can therefore understand how identity is closely connected to time and changes along with it: this is why one could say that, as Massimo Cacciari refers to the concept of tradition, identity is something that «persists in the form of becoming»[17]. Reconsidering this fundamental aspect of identity would perhaps help to review all those poisonously nationalistic positions, redefining territorial belonging based of a global vision. To this end, it is then fundamental to recall a thought of the poet Dante Alighieri who claimed to have «the world for home, like fish the sea, but that he had drunk the water of the Arno for a long time and had thus learned to love Florence»[18].

2.3 *State* and *Nation*: a binomial derived from the concepts of *border* and *frontier*

Following the "border-frontier binomial", one can understand how, in the same way, the concepts of *State* and *Nation* have evolved as a consequence. Starting from its definition, it is indeed possible to associate the concept of *border* with that of State[19]: this, in a certain sense, can almost be defined as its natural consequence, since in all the linguistic cases dealt with – even in those in which the strict sense of *border* has been lost over time with lexical modifications – the border has always represented an instrument for establishing supremacy and control over the territory it delimits. In the same way, the concept of *Nation*[20], starting from its definition, can be combined with that of the *frontier*: when, by extension of meaning, we speak of social, psychological and cultural frontiers, the Nation has to do with the people who inhabit the territories and who perceive that they share the same system of values and culture, attributing them a common identity in which to recognise themselves. Politically and socially, this new "second-degree binomial" has, over time, highlighted the difficulties arising from the fact that the State has not always coincided with the Nation. In this sense history has been punctuated by wars of repression that have sought in every way to literally annihilate or confine divergences with the aim of making the Nation adhere to the State. These policies have not had the desired success, and this can be demonstrated when one considers all the realities in which coercion has over time defined "States without a Nation" - such as Switzerland, which is made up of twenty-six cantons and has adopted four official languages - and "Nations without a State", such as the Kurdish people, but also the *zamejci* and *chicanos* discussed above. At this point, there is an urgent need to understand how to culturally reshape the conception of borders that, to this day, have fuelled the widespread nationalist sentiment that, faced with the failure of policy of ostracism that has inevitably provoked the emergence of new socio-political realities, persists in hostility by fuelling border conflicts.

3. What should be changed in the language to reverse the trend?

Starting from current linguistic comparisons of the definitions of *border* and *frontier*, two levels of evolution can be clearly distinguished: the first is that of the languages that still maintain a semantic separation between the two terms – such as Italian and English – while the second includes all the languages – such as French, German, US English and Chinese – that, when they no longer deemed it necessary, progressively abandoned the concept of border, maintaining only that of frontier. Considering the statistics of the world we inhabit, it is then evident that the semantically intrinsic mutability of the frontier – and inherent in the definition of *Nation* – has not been introjected into cultures that have nevertheless only embraced this term. The disconnect between language and data shows the inability to conceive the changing character of the edge. What then are stateless nations if

not the tangible product of the continuous reformulation of the frontier itself? Here, we are faced with the fact that language still lacks a third level of evolution: that which can accept the phenomena of deviation from the State-Nation correspondence and exploit them to the advantage of mutual cooperation, finally considering the border as a space of possibility. This would be the correct way to understand territorial borders: strips of territory capable of being Maria Lai's needle that sews two edges together without altering the identity of the two, but by leveraging the cultural value of those who live on the margins and, by its very nature, physically represent the union between the cultures that converge in it. Therefore, it is necessary to complete the evolution of the term *frontier* so that it becomes the most suitable contemporary device of union and separation in our globalised age. Paradoxically, in fact, we could try to understand what a truly borderless world means. Firstly, as Cacciari would again suggest, the lack of borders would transform difference into inequality[21], opening the door to even more widespread hostility than we already experience. Moreover, going back to ancient events relating to the Roman empire, *limes*, in its original etymology, suggested a nuance relating to that conflicting feeling, like Eros and Thanatos, which simultaneously saw beyond the border both something potentially interesting to bring in, and a potential threat of death. Thus, that primordial fascination towards discovering the world in its diversity would cease to exist by eliminating borders.

4. Conclusions: methods and practices

Some efforts at social reconnection have been undertaken in an attempt to resolve border adversities. Nevertheless, one aspect that is still missing is to truly value the local communities that have been identified as "Nation without a State". The artist Ronald Rael has tried, with his project *Teeter-Totter Wall*[22] to transform the wall between Mexico and the U.S. into a bridge: the swings installed astride the wall actually manage to bring together in a playful – and no less provocative – way the Mexican families divided by the border. However, this project is mainly a political gesture moved to raise awareness and, above all, it addresses the Mexican community, those *chicanos* mentioned by Gloria Anzaldúa, but leaves out the involvement of the Americans who continue to legislate in favour of the wall. The same happened with the *Interreg Italy-Slovenija* project that created, among other things, the Karst Geopark[23] that involved the natural heritage of the border, carrying out a cross-border project, but which, again, did not actively involve the *zamejci*. If, then, we must start again from a malleable and changeable vision of boundaries – as semantically the term *frontier* really suggests – it is necessary to leverage the participation of all local communities to ensure that reconnection projects can reach their goal by proving to be long-lasting. The acceptance of the temporal dimension that has linguistically distinguished the concept of *border* from that of *frontier*. In the same way if identity also has to come to terms with its constant reformulations, it is necessary to propose projects capable of recognising, safeguarding and actively managing the cultural heritage of the frontier. In this way, following the natural evolution of cultures, the common heritage will be continuously updated, creating the conditions for a real cooperative approach between the parties. This concept is also confirmed by the 2005 Faro Convention in which Europe commits itself «to develop knowledge of cultural heritage as a resource to facilitate peaceful co-existence by promoting trust and mutual understanding with a view to resolution and prevention of conflicts»[24]. Caring for one's own identity would then not become a pretext for fostering new hostile nationalist attitudes but a tool capable of founding an effective and permanent cooperation process.

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Biography
Flaminia Valchera graduated with honours in Architecture-Restoration from the University of Roma Tre in October 2020 and a few months later was enrolled in the Order of Architects of Rome. Her master's thesis - supervised by Professors M.M. Segarra Lagunes, F. Cellini, G. Caudo - entitled *Designing, negotiating, overcoming the border. Analysis of Trieste karst plateau* gave her the opportunity to reflect on the theme of the border, bringing to light its value and repercussions in the landscape, cultural and social fields. Interested in the issues of the conservation and valorisation of cultural heritage, in 2022 she published the article *From the border stories to the care of rural heritage: the cultural value of the Karst landscape* in the proceedings of the conference *The art of dry-stone walls for terracing: an intangible and material heritage to protect* in which she took part as a speaker.

HOME-steading
Subversions, Reversions, and Diversions of the Moral Right to Space

Wang, Hanxi[1,2]
1. Cornell University, Department of Architecture, Ithaca, NY, USA
2. University College London, Department of Human Geography, London, UK, hanxi.wang.22@ucl.ac.uk

Abstract

It can be argued that putting to words one's relationship with the earth has always been a prerequisite of architectural construction, and that such proclamations have required, in turn, structures of the abstract - moral, economic, legal, and of course, linguistic, that assign the necessary hierarchies of value and power to the human and nonhuman entities involved. Therefore, words are, like bricks and mortar, fundamental to the spatial construction of our world. One of the most powerful definitions of such kind, with legacies both catastrophic and subversive, can be found in the evolution of the word "homestead".

Built upon the philosophical ideas of John Locke, the conception of "homestead" invalidated an entire population's relationship with the earth, eradicated their livelihoods, cultural systems, rights to the land, and replaced them with colonial bodies, practices, and beliefs. Under the banner of this word, over 270 million acres of land and countless lives were indelibly altered. Yet, in contemporary times the invocation of "homestead" has facilitated instead the adverse possession of the weak and marginalised, who act in resistance against institutional structures to appropriate their own space in an environment designed for their absence.

Through an in-depth discourse analysis of 城市开荒 (urban homesteading), a phrase used to describe an emergent informal practice that leverages the Lockean proviso to re-appropriate expropriated land and ruralize China's rapid urbanisation, this paper examines the paradoxical agency and the intense spatial creativity that can be found through the subversion of words within the urban context. Gathering utterances and writings from TikTok to legislative policy, internet games to classical literature, I argue the importance of understanding not only the construction of words within a spatial context, but also the fungible, paradoxical and entangled ways of they act within the world.

Key words: Subversion, Decolonisation, Informal Agency, Land Rights, Tactical Reclamation.

归去来兮，请息交以绝游。世与我而相违，复驾言兮焉求？悦亲戚之情话，乐琴书以消忧。农人告余以春及，将有事于西畴。

I've come home! And bid farewell to the society of men. Since the world and myself cannot agree, What more have I to strive after? Joy will be found in the hearty talks with my kin, Or delight in music and books that lighten my mind. When the farmers tell me of the arrival of spring, There will be enough to do in the western fields.

Excerpt from "*Going Home*" by Tao Yuanming[1]

"Hence subduing or cultivating the Earth, and having Dominion, we see are joined together. The one gave Title to the other. So that God, by commanding to subdue, gave Authority so far to appropriate."

John Locke, *Second Treatise*, Sec. 35

1. Introduction

Every act of construction begins with a story, be it one that relays its history with the land or justifies its future upon it, each act begins with a story that provides legitimacy and protection by demonstrating its right to take place, argued through the conventions of right and wrong within its situated context. This paper follows the social media discourse of the informal practitioners of 城市开荒 (urban homesteading), where individuals illegally infiltrate what they recognise as the wastelands of China's rapid urbanisation to cultivate patches of vegetable gardens. Threading through various evolutions of so-called "original" appropriation between China and the West, this paper demonstrates how political ideologies as well as historical and literary imaginaries can be subverted by citizens to assert their Right to the City (Lefebvre 1991). The case of urban homesteaders demonstrates how individuals without formal organisation can leverage a diverse range of concepts from the Lockean proviso to the idyllic imaginary of the Peach Blossom Spring[2], to re-appropriate expropriated land and ruralize China's rapid urbanisation.

1.1. 城市开荒 (Urban Homesteading)

Fig. 1

Under the shadow of a concrete viaduct, a phone camera watches the sky brighten as a bent-over figure tends to his vegetables; in a city under COVID lockdown, a viewfinder pans from half-completed residential buildings to follow the movements of a mother and her small daughter watering vegetable sprouts emerging from reddish brown soil; in a thin sliver of land behind a flower bed in a residential neighbourhood, a young woman attempts to bring her wilted tomato sprouts back to life. These are just a few of the scenes that would appear if one was to search 城市开荒 (urban homesteading) on China's social media platforms (Fig. 1).

In the four decades since China's economic reform, China has achieved one of the most rapid rates of urbanisation, raising the percentage of its urban population from 21% in 1980 to 63% in 2020 (Xu and Akita 2021; Central Intelligence Agency 2022). Within this transformation, the practice of urban homesteading have emerged within the idle and wasted lands created by inefficient developments of expropriated rural land through Iji Kaifa (first class development), a model of urban expansion where rural people are removed from their land in exchange for monetary compensation and resettlement in

urban residential developments (Lora-Wainwright 2012; Gan et al. 2019; Qu et al. 2020). Infiltrating the "terra nullius" of urban idle lands, from vacant construction sites to neglected landscaping by the sides of streets or rivers, urban homesteaders dig up, clean, till and fertilise the soil to grow vegetables for the self-proclaimed purposes of good health, exercise, and leisure.

While local governments have formally condemned acts of urban homesteading as "backward", "unhygienic" and "selfish", and have acted to demolish the plots of vegetable gardens with tractors and diggers, the narrative presented by the homesteaders via social media continues to garner popularity amongst netizens through their careful alignment to the etymologies of party slogans, literary metaphors and historical imaginaries that argue for their moral right to exist.

1.2. Social Media as Subversive Narrative

Through social media, urban homesteaders permeate the descriptions of their labours and products with cultural and political references and associations to achieve a variety of associations. For example, the use of party slogans from both the past and the present aligns urban homesteads to valorous behaviour:

> To all the farmers of the city, today Granny officially passed the family inheritance [the urban homestead she established] in Wuhan to her little grandson! #FamilyTreasure #HumanCubComingOfAge **#ThoseWhoLabourAreTheMostBeautiful**
>
> A friend from my hometown came to help plant and water vegetables! **Labour is the most glorious![3]**

Alluding to pastoral imaginaries to evoke aesthetic empathy:

> In the forest of concrete towers and the cacophony of engines in my city, I have homesteaded a small vegetable garden to enrich our family's dinner table. What I plant is hope, with no expectations of results, but to enjoy the process, and harvest happiness.

Or, extolling the virtuous character of the older generation:

> In a foreign city, grandpa found a piece of wasteland. He opened it, weeded it, and cultivated it~ In less than a month, he has planted 11 varieties of vegetables. **He has laboured his entire life and never stopped, what reason do we have for not working hard!** 90-year-old grandpa is so awesome! (Fig. 2, Img. 4, caption translation by author)

Despite their lack of formal organisation, the proliferation of urban homesteading content across major Chinese social media as well as in-person networking have maintained a stable "non-movement" (Bayat 2013) of urban homesteaders in multiple Chinese cities undergoing rapid urbanisation[4]. Despite the disapproval of the local governments, representation through social media provides a social capital for urban homesteading that not only encourages positive associations with the informal practice and attracts more individuals to participate in homesteading but also ultimately influences market desires and changes to real estate development[5]. In the following sections, this paper breaks down some of the most popular references used by homesteaders to justify their right to land within the urban environment to examine the ways in which concepts and verbal mechanisms of the state are inverted, reverted, and subverted.

2. Inversion of Waste and Labour – Terra Nullius and the Politics of Productivity

Though the earth and all inferior creatures be common to all men, yet every man has a *property* in his own *person*. This nobody has any right to but himself. The *labour* of his body and the work of his hands, we may say, are properly his. Whatsoever, then, he removes out of the state that Nature hath provided and left it in, he hath mixed his *labour* with, and joined to it something that is his own, and thereby makes it his *property*.

(Locke 1994, 31, original emphases)

The elders often said, as long as you are willing to work hard, anything is possible, today I finally understood, **if you cultivate this plot of land, it is yours**.

#MyVegetableGarden
#UrbanHomesteading
#MyOwnOrganicVegetables

(Yi, excerpt from Douyin post)

In John Locke's Second Treatise of Government, written during the heights of European colonisation, the key to appropriation lies in the definition of "waste". For Locke, who derived his laws of governance from what he saw as the laws of nature and of God, nature was given by God to all men in common

ownership and men are obligated to "make use of it to the best advantages of life and convenience"(1994, 32). A man's labour upon the land to improve it is not only right and moral, but also mixes the land with his labour to make it his property. "Waste" therefore sets up the precondition for ownership with "labour" as the tool for appropriation – a rather simple formula that provided the foundation for the mass appropriation of Indigenous land in the Americas, Africa as well as Asia Pacific. From the Homestead Act of 1862 in the US to the Free Grants and Homestead Act of 1868 in Canada, the Waste Land Acts between 1854 and 1877 in New Zealand to the Crown Land Acts from 1860 to 1884 in Australia, colonial projects globally draw upon the "moral superiority" of agricultural productivity as the key mechanism of dispossession to deem less overtly cultivated Indigenous land as "waste" and available for appropriation (Fig. 2, Img. 2).

Fig. 2

Ironically within contemporary history, the same principles of Lockean homesteading are used by squatter communities to dismantle the kind of private ownership of the rich and powerful it espoused. The waste that colonial settlers once saw in untouched nature, squatters now see in dilapidated buildings, and urban homesteaders, in turn, see in the vacant construction sites of a newly urbanised city. As Martin O'Brien writes:

> [I]n contrast to common-sense conceptions […] rubbish is … not that which has no value; rather, it is that which motivates the search for value. (1999, p281)

The verbal act of identifying and labelling something as "waste" is therefore a productive act that sets up the right to act physically upon the site.

For Chinese urban homesteaders, labour is an exalted moral quality, not of Christian, but of revolutionary origin. The frequent references to "劳动 (labour)" and "节省(living frugally)" originate from a corporeal governmentality that helped the nation survive times of war, famine and economic depression. The imaginary of a selfless labourer or a hard worker recollects a deeply ingrained sense of moral character that is valued within Chinese society till this day (Fig. 2, Img. 1). Out of the 172 social media posts collected for analysis (Fig. 2, Img. 3, Img. 4), 21 were tagged #劳动者是最美的人 (#ThoseWhoLabourAreTheMostBeautiful), a reference to Maoist and contemporary Communist slogans praising the importance of labour within society.

The homesteaders who live in the fringes of the city patch up the wasteland of urban greenery.
#DigForVegetables   #Homestead
#HardWorkingLabourer   #PlantingHope
#ThoseWhoLabourAreTheMostBeautiful
(Lu, excerpt from Douyin post)

We must securely establish the notion that labour is the most glorious, labour is the highest virtue, labour is the greatest achievement, **labour is the most beautiful**, so that the people can further ignite their passion for labour, realise their potential for creativity, and create a more beautiful life through their labour.
Speech by Xi Jinping, April 28th, 2013[6]

While both past and contemporary slogans for labour were intended to encourage productivity and stimulate economic growth within formal sectors of industry, by associating their practices with the revolutionary ideals of labouring selflessly to improve the lives of others, urban homesteaders frame themselves as good citizens and their homesteads as productive labour that are aligned with, rather than resist against, the state.

3. Reversion to Nature - Opening Wastelands as Escape

All the men in the family have mobilised to homestead for vegetables. A precious **Peach Blossom Spring** in the city. Seeds are starting to sprout. The vegetable garden is filled with life.
(L, excerpt from Douyin post)

开荒南野际
守拙归园田
[…]
户庭无尘杂
虚室有余闲
久在樊笼里
复得返自然

Opening some wasteland by the southern wilds,
I abide by rusticity and have returned to my farmland.
[…]
Within my doors there is no dust or clutter;
In my empty rooms there is leisure to spare.
Long have I been in the confining cage [of the city];
Again, I have managed to return to Nature
(Excerpt from "Returning to Live on the Farmland[7])

The conception of 开荒 ("*kaihuang", homesteading*), the act of original appropriation, where unowned land becomes acquired through productive cultivation, has a physically congruent yet culturally varied connotation to the Lockean proviso. Where the proviso defines European ownership against that of an "other", the Chinese cultivation of wasteland emerged in an era without a clearly defined racial "other". Instead, the "other" was the urban as an antithesis to the simplicity and purity of nature – in a way, the opposite of the "other" for Locke, which he saw *as* the original state of nature. The term emerged in a seminal 4th century poem named "Return to Nature (I)" by Tao Yuanming, the representative poet of the Fields and Garden genre of Chinese poetry. In the poem, the land ownership established in the process of *kaihuang* was merely a means to the ultimate goal of peace by achieving a dwelling place in harmony with nature. As such *kaihuang* was both a reference to the physical creation of a farmstead and an allegory of breaking free from the "confining cage" and the "dusty net" of the city and returning to a state of nature, like a caged bird for the woods, and a pond-fish for the deep sea (Fig. 3, Img. 1). Though Tao lived more than sixteen centuries ago, his pastoral longing of a simpler, freer, slower past in contrast to the urban present is as, if not more, keenly felt within China's present urbanisation. The alienation felt by urban citizens within China's metamorphosis was a recurring theme within social media.

In the city, tall towers are built in droves, we plant vegetables to relive fond memories.
(Yu, excerpt from Douyin)

In a city of intimidatingly tall towers and the unrelenting noises from engines, I have cultivated a small vegetable garden.
(Ping, excerpt from Douyin)

A Peach Blossom Spring within the busy city, how beautiful it is to be close to Nature!
(L, excerpt from Douyin)

The practice of urban homesteading thus takes on the role of the city's polar opposite, an idyllic space that provides everything that the city denies: nostalgic instead of modern, soft instead of hard, warm instead of cold, vibrant instead of sterile, wild instead of controlled. A similar desire to escape from the harshness of urban life for a fictional idyll has emerged within contemporary popular culture through a genre of internet novels named 种田文 (cultivation novels). According to Baidu, the "cultivation novel" first emerged within contemporary society within Simulated Life Games (SLG) where the gamer employs a conservative strategy of "高筑墙，广积粮，缓称王 (build high walls, establish grain reserves, conquer slowly)" to protect one's own territories whilst slowly developing their resources in contrast to the high-speed, violent, and intensive pace of conventional video games[8].

A characteristic of the cultivation genre of the internet novel is the trope of time travel or fantasy world building that sets up the main character in the agricultural society of a bygone era. The protagonist gradually constructs their land and connections, developing their agricultural resources gradually to improve their economic, political, and technological prowess to defeat the antagonists. Works within this genre are noted for their methodical and logical storylines as well as their lack of conflict for the majority of the narrative. Later evolutions of the cultivation novel grew even more focused upon seemingly banal but extremely detailed descriptions of everyday life and character developments. Baidu outlined three reasons for this genre's popularity, particularly amongst young women: one, it provides a calming, happy, and warm fictional world that is healing for citizens of the modern Chinese society who live within highly pressured environments; two, the predominant use of time travel as a narrative trope where the protagonist is reborn within their childhood or another past era, allows the

reader to experience a sense of redemption and to imagine going back in time to fix mistakes or become an alternative self; three, the emphasis on detailed descriptions and historical accuracy makes the works of this genre fairly well-written and high quality[8].

Fig. 3

Similar to Tao Yuanming's Peach Blossom Spring, the cultivation genre situates the rural and the practice of agriculture within a utopic, escapist imaginary of a slower, more idyllic life connected to nature, an imaginary much shared, and exploited, by the homesteaders. The attachment of such narratives to the practice of urban homestead within contemporary culture indicates that the social significance of urban homesteads extends beyond its physical products or political debates of land rights and urban development into the metaphysical and psychological dimension. For the older generation that practices urban homesteading, the pastoral imaginary of the rural along with connections to labour and revolutionary valour comes from memories and habits formed from their lived experience of China's revolutionary history. However, for younger homesteaders born after China's economic reform in the 80's, 90's and even 00's, their posts on Douyin reflect an interest in homesteading that is directly connected to the fantasy of idyllic rural living that lacks grounded experience. Thus, the pastoral as an escape from urban life becomes almost supernatural in its ability to connect the practice of homesteading to fiction and virtual experiences, from online fantasy novels to internet games.

In 2008, Chinese game developer start-up 5 Minutes released an online multiplayer social network game called "快乐农场 (Happy Farm)" (Fig.3, Img. 2), which rose to become one of the most popular online games in Chinese history with 23 million daily active users at its peak in 2009. Techgearx.com approximated that over 15 million urban white-collar workers had spent more than 5 hours a day on Happy Farm, and techinasia.com reported that the game became so popular that it was even cited in divorce settlements and was criticised by state media due to concerns that its addictive nature would cause social problems. Commercially the game was such a great success that it was included within Wired's list of "The 15 Most Influential Games of the Decade" for its impact on social network gaming and went on to inspire a horde of agriculture-based copycat games both in and outside of China, such as the highly popular FarmVille on Facebook, as well as play a significant role in the establishment and growth of gaming social networks in China[9].

Within the game, players can grow crops, trade/sell their produce, and steal from their neighbours, with the latter, according to online forums, being one of the most well-loved and addictive aspects of the game. This popularity of the game and the overlap between its "virtual farmers" and urban homesteaders is evident in the common use of "Happy Farm" as an analogy and "I am coming to steal your vegetables" as a comment on other homesteader's vlogs.

Within the virtual platform of HappyFarm, not only could netizens experience a calm and meditative "slow life" that is the antithesis of their high-pressure urban environment, but they could also obtain things such as land that are out of their reach in their physical reality due to financial or state limitations. From this perspective, urban homesteading is a virtual reality/dream come true – it allows users to obtain land without the burden of payment, to create a space where they can escape from the

chaos of the city but still earn an urban wage and enjoy urban amenities such as better education and transportation. By conceptually linking their physical practice with online gaming/fantasy culture, homesteaders can enjoy the vicarious excitement of "looting" or "stealing" land and produce by "gaming" the modern capitalist system.

At the same time, the Happy Farm imaginary appears to be a useful marketing tool for developers as well. In a video posted by a local news channel, Yunlong Fenghuanggu, a residential development in Zhuzhou, Hunan, has converted its vacant land into allotments for its residents and labelled it the "Happy Farm".

We can't travel during pandemic, so let's homestead. Let children understand that every grain of food comes from hard work. **#HappyFarmRealWorldCombat** (Yang, excerpt from Douyin Post)

A new residential development in Zhuzhou provides **Happy Farms** for residents to "divide up the land" and plant vegetables. (Douyin post by Live from Zhuzhou News)

4. Subversion of Civility– Self-Sufficiency and Environmental Morality
With the rapid speed of China's urban development, there is limited capacity for oversight or quality control on the part of the state to ensure that developers maintain their developments (Qu et al. 2020). Local news reports as well as previous studies on urban homesteads by Zhu et al (2020) and Yu (2020) point out that in many urban areas the jurisdiction and responsibilities of various authoritative institutions are convoluted and unclear, which creates confusion and delays in governance. While this provides an ambiguity that the homesteaders exploit, as the state and corporations fail to provide the type of environment promised to its citizens, the citizens' practice of urban homesteading is in fact taking on their work and responsibility. Numerous Douyin homesteaders noted that they are homesteading to provide a reliable source of produce at a reasonable cost that the cities were unable to guarantee during the pandemic.

In fact, this shifting of responsibility onto the shoulders of citizens during times of crisis was at the root of the historical emergence of some of the political slogans popular amongst homesteaders. For example, during the Sino-Japanese War, as the Red Army (Chinese Communist forces) faced severe food shortages as a result of the Japanese invasion, economic blockades by the Kuomingtang as well as several natural disasters in the north of China, Mao Zedong called upon the people to provide for themselves in order to outlast the Japanese invasion. The poster child of the movement was the story of the 359th Brigade, which was deployed to open the muddy wastelands of Nanniwan to increase productivity and create self-sufficiency during a time of crises. The exploits of the 359th was heralded as a success of the intelligence and hard-working character of Chinese people, minted in a documentary, folk song, and famous calligraphy by Mao Zedong with the slogan (Fig. 4, Img. 1):

自己动手，丰衣足食。
(*ziji dongshou, fengyi zushi*, "do it yourself, want for nothing")

Fig. 4

The practice of outsourcing public services to the voluntarism of the people, which echoes neoliberal characteristics of community gardening that have been analysed in Western academia (Ernwein

2017), has allowed the Chinese state to overcome multiple disasters in its contemporary history from political struggles such as the Great Leap Forward to natural disasters such as the Tangshan earthquake of 1976 in addition to the aforementioned Sino-Japanese War. The revolutionary values of self-sufficiency and hard work, as embodied by the slogan and the act of *kaihuang*, remained popular within society after the war.

In parallel, since 2012, when the central government wrote into the Constitution of the Chinese Communist Party a vision for 生态文明建设 (ecological civilisation-building), urban sustainability and environmental protection have been a major campaign within China's urban planning (Olivier Krischer and Luigi Tomba 2019). Initiative with catchy slogans such as 美丽中国 (beautiful China) and (clear waters and green mountains) have become widespread in popular culture in order to encourage citizens to do their part and participate in sustainable and environmentally conscious lifestyles (Fig. 4, Img. 2) - a task that urban homesteaders have eagerly taken up.

Homesteading in the vacant land in front of the residential building to **become self-sufficient, adding a bit of green to the city** #VegetablePlanting #LabourIsTheMostGlorious #PastoralLife #Homesteader
    (Chang, excerpt from Douyin post)

Homesteading for vegetables in a desperate time, clearing up the backyard wasteland to grow vegetables, **becoming self-sufficient as well as environmentally friendly and economical** #JoysOfGardenLife #PlantingVegetables #OrganicVegetables #Homesteading #WildTrees #DesperateTimes
    (Gong, excerpt from Douyin post)

By representing their homesteading efforts as the volunteering of their own bodies and labour not just to lessen the burden on the state in terms of food provision but also to contribute to the party's goals for greener healthier cities, urban homesteaders seem eager to embrace neoliberal "exploitation" in order to avoid demolition. For example, many commenters on the post by Live from Zhuzhou mentioned at the end of section 3 (describing the residential development that have decides to rent its vacant land to residents as vegetable gardens) argued that such schemes are not only pleasurable for the residents but also positive in their contribution to the nation:

This is the life I long for, I want to go plant vegetables too.

Very creative, I like it, I think this can become part of the country's policy to save cropland and increase food production.

Planting vegetables is aesthetic and fun, can stimulate small-scaled economies and protect our country's "breadbasket".

5. Conclusion
Though it is nearly identical to the practice of Lockean homesteading in its justification of land use/ownership through the valorisation of agricultural productivity, urban homesteading is a project of inward escapism and survival whereas the Lockean homestead is one of outward expansion and development. The combination of both within the practice of urban homesteading, as a form of escapism into fantasies of pastoral life from the harshness of urban life through the occupation and appropriation of land they deem to be in "waste", allow the homesteaders to take on identities both docile and political, both romantic and utilitarian, both inward facing and outwardly expanding.

Fig. 5

The success of the story that legitimises an act of appropriation lies not in itself, but in the nature of its entanglement with the structures of the society within which it is situated. The continued survival and proliferation of urban homesteaders rely, not on formal structures of resistance, organisation, or aid in the forms of NGOs or charities, but on the rhetoric of positive citizenship and the imaginary of appealing pastoral peace they evoke through the power of words and social media platforms. Their understanding and intentional misinterpretation of etymologies allow them to take ideologies, pop cultures, and, legal frameworks made for the visions of top-down governance and turn them into "weapons of the weak" (de Certeau 1984) in their pursuit of their right to the city. In answer to the central, timely, and worthy question asked by the symposium, the case study of the urban homesteaders demonstrates the power of etymologies as a resource of spatial agency that is more economical, flexible, viral, and democratic than brick and mortar.

Notes

1. The poem was written by Tao Yuanming, the seminal poet of the Fields and Garden genre, upon his retirement from bureaucratic service to return to his family homestead in 405CE. Translation of poem by Stephen Field, Ruralism in Chinese Poetry, 13.

2. The Peach Blossom Spring is a common allegory used in China to denote a fantastical location of extraordinary natural beauty where one can be sheltered from the troubles of the world, in particular those of cities. The allegory originated from Tao Yuanming's famous fable of the same name. Written in 421CE, the fable tells the story of a fisherman's accidental discovery of an ethereal utopia set during a time of political instability McGreal, Great Literature of the Eastern World, Harper Resource.

3. All social media excerpts have been anonymised or attributed to pseudonyms in order to protect the privacy of the homesteader. Translations of the excerpts by the author.

4. See remote sensing analysis and survey of urban homestead distribution in Wang, Assessing the Impact of Informal Ruralisation Practices within the Rapid Urbanisation of Wuhan, IGARSS 2023.

5. See section 4 for description of emerging incidences in real estate developments in China where developers, who are unable to proceed with construction on bought land after the initial phases of development, opt to rent such land to existing residents for vegetable gardens. Such schemes have been marketed as Happy Farms (see game in section 3) and urban homesteads.

6. http://cpc.people.com.cn/n/2013/0429/c64094-21323712.html [published on 28/04/2013, accessed on 10/06/2022]

7. Translation by Charles Kwong, The Rural World of Chinese 'Farmstead Poetry' (Tianyuan Shi), 65.

8. https://baike.baidu.com/item/%E7%A7%8D%E7%94%E6%96%87/1644809

9. https://www.techinasia.com/rise-fall-china-happy-farm-social-game-2012 [posted 28/12/2012, last accessed 10/06/2022]; https://www.chinasmack.com/happy-farms-popular-online-game# [posted 21/10/2009, last accessed 10/06/2022]

Image Captions

Fig. 1. Examples of urban homesteads and their homesteaders from social media: 1) Homesteads patches taking over undeveloped lot [source: Xigua videos]; 2) retired man homesteading under the light rail [source: Douyin]; 3) a grandma bringing water for her homestead [source: xcool.com]; 4) middle-aged man homesteading under a bridge [source: Douyin]; 5) urban homesteads spring up inside a stagnated Evergrande construction site [source: Douyin]; 6) homesteads established along a river bed [source: Douyin]

Fig. 2. Inversions of waste and labour: 1) Poster published in 1989 in honour of national model workers, the slogan reads 无私奉献劳动光荣 (Selflessly and respectfully presenting the glory of labour); 2) American Progress (1872) by John Gast, an allegory for Manifest Destiny and the American westward expansion; 3) a woman homesteading in a failed urban green space between the street and residential developments [source: Douyin]; 4) a 90-year-old grandpa who's established a homestead with 11 varieties of plants in under a month [source: Douyin].

Fig. 3. Reversion to Nature: 1) Fairyland of Peach Blossoms by Qin Ying (ca. 1494-1552) [source: Tianjin Museum]; 2)&4) screenshots from a young man's urban homestead vlog where he compares his cultivation to the game Happy Farm [source: Douyin]; 3) a young woman's vegetables from her homestead by the river [source: Douyin].

Fig. 4. Subversion of Civility: 1) Calligraphy of the slogan 自己动手，丰衣足食 (do it yourself, want for nothing) by Mao Zedong for the documentary Nanniwan [source: Baidu]; 2) Poster with the slogan 守护绿水青山，赋能美丽广州 (Protect Clear Water and Green Mountains, Empower A Beautiful Guangzhou) from Guangzhou Municipal Planning and Natural Resources Bureau; 3) A man homesteading with the caption "Homesteading for vegetables, do it yourself, want for nothing" [source: Douyin]; 4) A newly established homestead in a vlog with the hashtag #BeautifyOurEnvironment [source:Douyin].

Fig. 5. Examples of urban homesteads in Wuhan found through remote sensing analysis (Wang, 2023).

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Biography

Hanxi Wang is a licensed architect, urban geographer, and ESRC-funded PhD researcher whose work questions the dominant narratives of power and agency within the urban environment. In particular, she is interested in informal practices of urban ecology and the complex, sometimes paradoxical ways in which their practitioners negotiate, adopt, or subvert top-down structures of governance to create alternative visions of the city. She has multiple teaching and research experiences at Cornell University and the University of Oxford. Her current research project, Ruralizing Urban Wastelands — Homesteads and Subversive Metabolisms in China's Growing Cities, which investigates the subversive influence of displaced farmers in the wastelands of China's rapid urbanization and the potential of informal practices in creating strategies of urban metabolism, has been exhibited at Cornell University and presented at the 2022 Royal Geographical Society Annual International Conference in Newcastle as well as the 2023 International Geoscience and Remote Sensing Symposium.

The Term "Architectural Art" in the 1950s Chinese Architectural Theory
A Semantic Transplantation

Wang, Xuerui

Department of Architecture, College of Architecture and Urban Planning, Tongji University, Shanghai, China,
wangxuerui@tongji.edu.cn

Abstract

Although the term "Architectural Art" is not commonly used in English, the opposite is true in Chinese. Generally, "Architectural Art" or "Art of Architecture" would be used as the English equivalent of the commonly used Chinese phrase "Jianzhu Yishu." However, "Architectural Art" was not an indigenous phrase in China; rather, it was a term evolved over an extensive historical process. During 1949-1959, the Chinese government adopted a "one-sided" policy of learning from the Soviet Union. Chinese architectural scholars then extensively translated Soviet architectural theory into Chinese. When dealing with the Russian word "Архитектура," they would invariably translate it as "Jianzhu Yishu" (Architectural Art) rather than the word's original meaning of "Jianzhu" (Architecture).

This paper examines the intellectual underpinnings for this translational deviation. It retraces that architecture was not viewed as a material art in the traditional Chinese notion; instead, its value lay more in its spirituality, with its materiality being considered as an artifact serving a functional purpose. The idea of "architecture as an art" was progressively introduced to China in the 1920s. The country's first generation of professionally trained Chinese architects then used the notion as a discursive tool to construct their own identity. Following the founding of the PRC, some Chinese architectural scholars wanted to exploit the "national form" of architecture as a symbol of national identity. At the same time, the Stalin-era neoclassical style was introduced, which gave special focus to the aesthetics of architecture. After 1955, China's understanding of "architectural art" grew more entangled as Soviet architectural theory moved toward standardization. This paper explores this historical process and tries to pinpoint how the term "Architectural Art" has been appropriated, transformed, and used in various contexts, to provide a lens of Chinese architecture within the theoretical framework of multiple modernities.

Key words: Architectural Art, Chinese Architecture, the Soviet Union, Architectural Theory, Translation.

1. Introduction

In contemporary architectural theory, the viewpoint that "architecture is a unity of art and engineering" is almost universally accepted and uncontroversial. However, this perspective is not inherent or immutable but has gradually evolved over an extensive historical process. When examining the development of Chinese architecture since modern times, we can observe a prolonged and intricate cognitive process regarding the relationship between architecture and art, which is deeply reflected in the usage of the term "architectural art" in the Chinese language. Therefore, investigating the semantic evolution of the term "architectural art" today is, in fact, an exploration of the cognitive transformation of Chinese architects regarding the relationship between architecture and art.

2. Traditional Chinese Concepts of Architecture

The discussion in this paper begins with an exploration of the ancient Chinese understanding of architecture. Renowned Chinese architectural theorist Liang Sicheng once mentioned, "Viewing architecture as an art has never been formally or consciously acknowledged in China for thousands of years. In the past, architecture was always regarded as the work of mere craftsmen, at most possessing some artisanal skills—a purely practical matter. However, this perspective implicitly recognized the unity of art and engineering in architecture. In the past two or three decades, although intellectuals have started to have slightly different views on architecture, there is still an admiration for Western architecture as superior engineering, while Chinese architecture is still perceived as 'vernacular architecture.' Even though architecture has recently been more widely recognized as an art, it has not received the attention it deserves. From our works over the past four years, it seems that architects themselves have not given due importance to the artistic aspect of architecture. Today, as our country's economic development advances rapidly and the cultural demands of the people continue to grow, it is high time for us to approach this issue with utmost seriousness."

The speech by Liang Sicheng at the founding conference of the Chinese Architectural Society in 1954 may serve as a foundational basis for discussing the lineage of modern architectural concepts in China. It reveals at least three different understandings of the relationship between "architecture" and "art" in different historical stages: ancient times, the modern era (especially the early to mid-20th century as referred to by Liang Sicheng), and the early 1950s when Liang Sicheng delivered the speech.

In traditional Chinese perception, "architecture" as a knowledge imparting discipline was not understood as a spiritually artistic creation akin to calligraphy and painting, but rather as a practical domain of craftsmanship, practical knowledge, and technical application. Liang Sicheng explained the distinction between traditional Chinese architecture and the art of stone inscriptions and paintings in his 1944 publication "Why Study Chinese Architecture?" stating, "Chinese stone inscriptions and paintings have always been highly valued by literati. The love and appreciation for them by various dynasties, which surpasses that of literature and poetry, is the enduring spirit of our culture. In contrast, architecture, for thousands of years, has been predominantly in the hands of artisans and craftsmen. Most of its artistic expressions are the unconscious results of mentorship and evolution."

Banister Fletcher also explained that in ancient China, architecture was not considered an art form: "In the minds of Westerners, fine arts are acknowledged by the Chinese through painting, while sculpture, architecture, and crafts are perceived as the work of craftsmen. Art is seen as poetic (in terms of emotions) rather than materialistic. The Chinese are fascinated by the beauty of nature rather than the feelings evoked by architecture, which they merely perceive as a practical necessity of life."

Although Liang and Fletcher expressed similar views on ancient Chinese architecture, namely that architectural knowledge and technical mastery were in the hands of craftsmen and not considered as a form of art, the physical entities and spatial characteristics of architecture as human habitats and functional spaces still reflect the ancient Chinese way of life and aesthetic considerations in a subtle and implicit manner. The artistic conception and conceptual attachments added by ancient Chinese literati to architecture often passed down through poetry, literature, and painting, using architecture as a medium to discuss history, express aspirations, or convey emotions, thereby transcending the realm of practical utility in daily use. Therefore, even though these architectural artifacts may have long vanished, they still serve as an indispensable collective memory within Chinese culture, representing shared cultural landscapes that embody traditional Chinese spirit and emotions.

3. The Shift in Modern Architectural Perception

Since the mid-19th century, concession areas such as Shanghai, Tianjin, and Wuhan were established, introducing Western modern construction techniques and materials to China, along with the Western traditional profession of architects. Foreign architects began practicing in China and

gradually gained recognition from the public. On the other hand, there were four main sources for local professional architects: the first group consisted of traditional craftsmen and construction contractors transitioning into the field, the second group included civil engineers who also engaged in architectural design, the third group comprised architects who returned from overseas studies in the 1920s, and the fourth group emerged from autonomous architectural education in China. The latter two appeared relatively later, and thus, in the early stages of their careers, they faced the significant challenge of transitioning their identity from traditional craftsmen to modern professionals within the social consciousness. Additionally, they had to confront the competitive environment of foreign architects who had long dominated the market.

For the architects who returned to China after studying abroad in the 1920s, their education overseas was largely based on the Beaux-Arts tradition, derived from the École des Beaux-Arts in Paris. The term "Beaux-Arts" itself refers to "Fine Arts," aiming to understand and practice architecture as an art through the establishment of universal aesthetic standards. This educational background not only subtly influenced the self-identity and perception of the first generation of local professional architects but also helped them distinguish themselves from engineers involved in architectural design, thereby seeking more practical opportunities and market share. It is worth noting that although modern Chinese architects made efforts to proclaim to the public that "architecture is a combination of science, technology, and art," in the competitive design industry, they often emphasized their strengths while downplaying the weaknesses of others. This means that when researching and addressing architectural problems, they tended to focus more on the artistic rather than engineering aspects, in order to showcase their expertise in the "Beaux-Arts" knowledge acquired within the Western academic architectural education system.

With the gradual introduction of Western architectural theories and artistic concepts into China, new trends and ideas have begun to permeate the field of architecture. This has not only challenged and influenced traditional notions but has also presented new requirements and standards for the functionality and aesthetic value of buildings. The implementation of significant architectural projects such as the Sun Yat-sen Mausoleum and the Greater Shanghai Plan, along with media exposure and public exhibitions related to architecture, has further contributed to the societal awareness of the architectural profession. Simultaneously, architects such as Liang Sicheng, Tong Jun, and Yang Tingbao have played integral roles in the establishment and development of architectural research and education in China, progressively disseminating and gaining recognition for the concept of architectural artistry through academic means.

Simultaneously, the deliberate inclination of architects towards the artistic aspect of architecture aligns with the unprecedented social prestige of Chinese painters and art theorists driven by nationalist ideology. By 1930, historian Qu Duizhi delivered a lecture at Nankai University, where he stated, "Architecture is the most representative of Chinese art that embodies the national spirit. Foreigners have shown considerable attention to Chinese architectural art. The reason lies not only in the grandeur of the buildings and the splendour of the decorations but also in the evolutionary process that reflects the entire cultural transformation." From his perspective, the evolution of Chinese architecture reflects the process of cultural transformation in China, and therefore, architecture should be considered the art form that best represents the national spirit. This expression signifies a great change in the perception and evaluation of architecture by modern intellectuals compared to ancient times. They no longer view architecture solely as practical living and production spaces or physical representations of Confucian hierarchical systems in form and structure, but rather as cultural symbols and artistic mediums that express the national spirit.

Driven by this concept, many modern intellectuals and architects published articles with "architectural art" as their theme, reflecting their diverse concerns regarding architectural knowledge. The majority of these articles were published in the 1930s. Some authors focused on exploring the history and traditions of architectural art, with particular emphasis on uncovering the essence of traditional Chinese architecture. Other authors drew inspiration from Western architectural theories, paying attention to and introducing the trends and styles of modern architecture.

Overall, the emphasis on "architectural art" by Chinese modern local architects stemmed from various factors, including the influence of overseas study experiences, pressures from the competitive architectural market environment, and the drive of nationalist ideologies. They attempted to integrate architectural knowledge with art, endowing architecture with greater cultural significance and spiritual connotations. Through publishing articles, engaging in academic research, and designing architecturally artistic structures, Chinese modern local architects sought to promote and develop the concept and practice of "architectural art." This not only made foundational contributions to the

development of modern Chinese architecture but also provided clues for understanding the emergence and shift of Chinese architectural theory in the 1950s.

4. Focus on the 1950s: Shift in the Concept of "Architectural Art"
After the establishment of the People's Republic of China (PRC), the understanding of "architectural art" took on a more complex appearance in response to changing historical contexts. In terms of architectural theory, with the implementation of the policy of aligning with the Soviet Union, the Chinese architectural field rapidly imported a significant amount of Soviet architectural theory. At the time, the prevalent architectural style adhered to during Stalin's era, characterized by neoclassicism and slogans such as "national form, socialist content" and "socialist realism," placed significant emphasis on the artistic aspects of architecture. Soviet architectural theories gradually gained acceptance within the Chinese architectural community through the restructuring of design institutes, department adjustments, exchanges with Soviet experts, and the translation of theoretical works. On one hand, Soviet theories aligned with the desire of some Chinese architectural scholars for "national form" architecture as a symbol of national identity, representing a 20th-century political ideal centred on China. On the other hand, they also brought about pressure and confusion for Chinese architects in creatively interpreting and transforming foreign architectural theories to be applied within the context of China's architectural development.

4.1. From "Архитектура" to "architectural art"
From the translation of Soviet architectural theory into Chinese, we can clearly discern the particular significance attributed to the term "architectural art" in the early 1950s. When we consult the "Russian-Chinese Dictionary of Architectural Engineering" compiled by the Architectural Engineering Publishing House of China in 1959, the Chinese translation of the Russian word "архитектура" is standardized as "architecture, architectural science, architectural art". However, when reading various Chinese translations of Soviet architectural theories, we observe an interesting phenomenon: many translators, when dealing with this term, often opt not to directly translate it as "architecture" but consistently translate it as "architectural art". A notable example is seen in the works of translators such as Chen Zhihua, Gao Lyutai, and Qinghe, who all translate the term "архитектура" as "architectural art" in the titles of their translated books. Why did translators deliberately add the term "art" in the Chinese translation of "архитектура"? What were translators hoping to express or emphasize through the use of the term "architectural art" in Chinese?

This phenomenon can be explained from several perspectives. First, the term "Jianzhu" (architecture) in the Chinese context is polysemous, encompassing not only the discipline of architecture but also serving as a generic term for buildings and infrastructure. The ambiguity and polysemy of the term "Jianzhu" in the Chinese context have prevented the formation of a clear consensus and understanding of the disciplinary significance of architecture in China. In contrast, in many Western and Soviet countries, the term "architecture/архитектура" clearly refers to the "art and science of designing buildings." For instance, in the United Kingdom, the founder of the Royal Institute of British Architects, Thomas Leverton Donaldson, early on divided architecture into "artistic" and "scientific" aspects. Perhaps because the concept of "Architecture as a Fine Art" has long been a well-established convention in the English-speaking context, there is no need to emphasize "art" when discussing "architecture." However, for the Chinese term "Jianzhu," which encompasses multiple referents, the situation is different. Therefore, the practice of translating "архитектура" as "Jianzhu Yishu" (architectural art) can be considered a semantic extension aimed at highlighting the distinction between "Jianzhu" (architecture), "Jianzhu Yishu" (architectural art), and general "Fangwu" (buildings), emphasizing the aesthetics and artistic qualities of architecture and reflecting the era-specific characteristic of China incorporating architectural discussions into the field of arts and literature.

This translation choice is also influenced by the politicization of architectural theory, reflecting the emphasis on the artistic aspects of architecture in Soviet architectural theory during the Stalin era. According to the analysis of translation strategies by American translation theorist Lawrence Venuti, "foreignization" involves preserving the linguistic features of the source text to bring the semantic content closer to the author, while "domestication" involves localizing the source text to bring the semantic content closer to the reader. If we understand the specific translation of "Jianzhu Yishu" as a form of "foreignization" in translation, it can be explained as the translator's desire to align the Chinese semantic content with the Russian source text. Under the theoretical orientation of Stalin's emphasis on the artistic and aesthetic value of architecture, the concept of architecture needed to align with the popular political propaganda and cultural policies of "comprehensive learning from the Soviet Union." It needed to connect architecture with socialist aesthetics, conveying the government's support for Soviet cooperation and the emphasis on socialist artistic culture. In this sense, the translation of the term "Jianzhu Yishu" can be seen as a product of political pragmatics.

Overall, translating "архитектура" as "Jianzhu Yishu" (architectural art) was a strategy adopted under specific historical and political circumstances to emphasize the artistic, cultural, and aesthetic value of architecture. This hybrid and temporary terminology influenced the understanding of architecture by Chinese architects at the time, making them more focused on the artistic and cultural values of architecture. At the same time, it also reflected the cultural policies and ideological orientations of the government. This example highlights how language and terminology are influenced by specific political, cultural, and social contexts and how they subtly shape disciplinary theory discourse and concepts.

4.2. Shift in "Architectural Art" and the Transformation of Theory
However, the one-sided emphasis on "architectural art" in the Chinese architectural community soon encountered new conceptual challenges. On December 7, 1954, Nikita Khrushchev delivered a report titled "On the Widespread Use of Industrial Methods in Construction to Improve Quality and Reduce Costs" at the All-Soviet Conference of Construction Workers, which criticized the "national form" architectural concept advocated by the Soviet architectural community during the Stalin era. Khrushchev argued that Stalin's emphasis on the artistic aspects of architecture led to excessive costs without considering economic efficiency. Socialist countries should vigorously develop industrial standardized construction, with the primary task of building houses for the vast laboring people, rather than focusing solely on grand yet impractical urban images.

The Chinese delegation attending the conference quickly received and transmitted this significant development to China, causing a tremendous response in the Chinese architectural community. The full text of Khrushchev's speech was published in the People's Daily in January of the following year. The Chinese Architectural Industry Press immediately halted the translation of all ongoing manuscripts and concentrated all efforts on translating the documents of the Second All-Soviet Congress, which were published domestically in February 1955. In the same month, the Ministry of Construction held a "Design and Construction Work Conference," calling on the Chinese architectural community to review and criticize the wasteful practices in design work and the prevailing tendency of emphasizing art while neglecting economic practicality in light of the spirit of Khrushchev's conference. This conference marked the beginning of an event in the history of modern Chinese architecture known as the "anti-waste campaign."

Although on the surface it appeared that the Chinese architectural community followed the Soviet Union's theoretical shift and initiated the anti-waste campaign, China did not immediately embrace the extensive promotion of industrialized and standardized construction like the Soviet Union did. Instead, China emphasized two main points of criticism. Firstly, it criticized the wasteful practices of project owners and design units. Secondly, it critiqued the erroneous intellectual tendencies prevalent in Chinese architectural thought at that time, attributing the economic wastefulness in part to these tendencies. Liang Sicheng, as a prominent figure in architectural theory, became the primary target of criticism, particularly for his association with "formalism and retroism" in architectural development. This phenomenon reflected another significant influence from the complex historical context of the time, namely the "intellectual transformation movement" initiated in the early 1950s and the subsequent political campaign against "bourgeois idealism." During this period, a series of critical articles not only scrutinized the academic ideas and personal attributes of Hu Shi, Hu Feng, and Liang Shuming, but also "involved major issues related to establishing the ideological guiding position of Marxism". Under this influence, the anti-waste campaign in the architectural community emphasized the critique of "bourgeois formalism and retroism" in architecture.

If the political climate of critiquing bourgeois idealism in the academic field and the qualitative assessment of "formalism and retroism" in the architectural community constituted the premises and objectives of the ideological critique within the anti-waste campaign, the demands for waste reduction and cost reduction introduced the dimension of economic reality. With all three elements established, the critique movement resembled an evaluative essay, while the underlying issues involved in it represented the conceptual struggle of the Chinese architectural community to apply the dialectical materialism and historical materialism methodologies of Marxist theory, as well as to embark on a re-evaluation and rearticulation of architectural history and theory. Within the framework of dialectical materialism and historical materialism, the critique articles generally followed the following logic: first, they reinterpreted architectural theory using the methodology of dialectical materialism or adopted the perspective of historical materialism to frame the basic development context of architectural history. They then compared the architectural theories and historical perspectives derived from this approach with Liang Sicheng's discourse, seeking out differences to demonstrate the presence of "bourgeois idealism" ideological issues in Liang Sicheng's scholarly activities. Employing a challenging language style, multiple authors, through their critique of Liang Sicheng, showcased the reshaping of Marxist

philosophy in Chinese architectural writing—by dissecting Liang Sicheng's discourse and juxtaposing it with quotations from Marxist philosophical leaders—they incorporated the diverse consciousness and positions regarding Chinese architecture into a dialectical order of opposing perspectives.

When we return to the examination of the term "architectural art," we find that Liang Sicheng's advocacy of "architectural art" originally referred to a professional term discussing form and style within the scope of architectural design. However, during the anti-waste campaign, it also became a target of criticism associated with capitalist ideological tendencies. From a literal analysis, Liang Sicheng's proposition that "architecture is a form of art" encompasses two ambiguous interpretations: one is the belief that "architecture is a form of art," implying that architecture belongs to the realm of art; the other understanding is that "architecture possesses a certain artistic quality" while also possessing other attributes, such as engineering aspects. Although Liang Sicheng emphasized the artistic nature of architecture based on Soviet theory, he consistently leaned towards the latter understanding. Unfortunately, during the anti-waste campaign, the understanding of "architecture is a form of art" often overlooked Liang Sicheng's transformation of this definition and strongly favoured the first interpretation, using it as one of the important arguments to criticize Liang Sicheng. For instance, Chen Gan and Gao Han stated, "(Liang Sicheng) uses the issue of architectural art to replace or even attempt to encompass the existing problems in Chinese architecture, thereby urging architects to study the 'French style' of our country's old buildings, in order to design so-called 'national forms' of architecture based on 'national traditions'". Thus, "architectural art" has become a theoretical category that simultaneously evokes sensitivity, complexity, and confusion among Chinese architects.

4.3. Misunderstandings, Confusion, and Reflection in the Debates
The theoretical discussions on the topic of "architectural art" continued from 1955 to 1961. In 1955, Zhai Lilin, a teacher at Tongji University, published an article in the Journal of Architecture, addressing issues such as the artistic and class nature of architecture and the interpretation of "national form" and "socialist content." Although this article was published in the same period as several articles criticizing Liang Sicheng's "formalism and revivalism" views, there was no explicit mention of Liang Sicheng in Zhai's article. This does not mean that Zhai's article was unrelated to the anti-waste campaign; on the contrary, it precisely highlighted theoretical issues that were exposed in the ideological critique of the campaign but had not yet been fully discussed or reached a consensus.

In the following two years, a total of nine articles debated and discussed Zhai's article. The divergent arguments regarding architectural art reflected both the chaotic state of the Chinese architectural theory field at that time and the enthusiasm and concerns of Chinese architects in the early years of the country's establishment. Ultimately, these debates collectively pointed to the challenges Chinese architects faced when attempting to apply Marxist principles to interpret architectural theory. For example, Zhai Lilin attempted to use a binary framework of "form and content" to logically deduce the problems faced by the Chinese architectural community. However, he was unable to fully articulate the ways in which architecture participates in and reflects social reality and cultural traditions. The key opponents of Zhai's article, young architectural theorists Chen Zhihua and Ying Ruocong from Tsinghua University, emphasized the Marxist perspective that views architecture as a reflection of social and economic relations. However, they seemed to underestimate the agency of architects in actively shaping the architectural environment. Although both sides approached architectural theory from the perspective of Marxist principles, their viewpoints were not based on a shared understanding of unified concepts. Therefore, the texts of these debates not only presented misunderstandings and controversies regarding the fundamental concepts of architectural art but also reflected the perplexity, contemplation, and adaptation processes of the Chinese architectural community in the face of social and cultural transformations. They also demonstrated the ongoing reflection on the positioning and value of architectural culture in the context of modernity.

In 1959, with the determination and implementation of the schemes for the ten major buildings for the tenth anniversary of the founding of the PRC, as well as the preliminary launch of several competitions on residential and public buildings, the discussions on "architectural art" gradually transitioned from divergence to convergence, and eventually focused on the Architectural Art Symposium jointly organized by the Ministry of Construction and the Chinese Architectural Society in May 1959. This conference mainly discussed two issues regarding "architectural art": national style and inheritance versus innovation. Many renowned architectural historians, educators, and architects participated in this symposium and expressed their respective viewpoints. However, compared to the diverse theoretical perspectives in the architectural art debates of 1955-1957, the 1959 Architectural Art Symposium resembled a reinterpretation of established issues. All discussions ultimately converged in the concluding speech by Liu Xiufeng, Deputy Minister of the Ministry of Construction, titled "Creating a New Socialist Architectural Style for China." His speech reviewed the tumultuous journey of

architectural design in the past decade and provided a calm and objective assessment of the current state of architectural activities in China. He almost mentioned all the theoretical issues that had garnered significant attention in the Chinese architectural field over the years and attempted to provide a comprehensive answer to persuade and encourage Chinese architects who had been troubled by previous criticisms.

Regarding the artistic aspect of architecture, Liu Xiufeng pointed out that architectural art depends not only on functionality and structural rationality but also on the aesthetic appeal of form. The process from architectural design to construction is both material production and artistic creation. Architects should not separate architectural art from the physical structure nor abandon functionality and structure solely for the sake of aesthetic form. To some extent, this speech eased the tension and restrictions of the previous criticism movement and slightly relaxed the ideological constraints on architectural form. This is because the concepts of functionality and structure had once been denounced as associated with capitalism in Soviet architectural theory, and these theoretical viewpoints had also been adopted and followed by China. Regarding inheritance and innovation, Liu Xiufeng proposed learning from all architectural achievements to replace the previous compulsory emphasis on absorbing Soviet architecture theories.

In March 1961, Liu Xiufeng once again convened an architectural art conference in Shanghai. Most of the speeches focused on providing theoretical interpretations of Liu Xiufeng's concept of "China's socialist architectural new style" proposed during the 1959 symposium. However, due to the lack of substantial progress in architectural practice, these metaphysical arguments did not yield practical results and instead became mere repetitions of the converging political discourse.

Afterward, as the political situation tightened, discussions on architectural art gradually waned. Professor Wu Huanjia from Tsinghua University observed that in the "Terminology of Architecture, Landscape Architecture, and Urban Planning" announced by the Chinese National Natural Science Nomenclature Committee in 1996, the term "architectural art" was no longer included. One of the reasons for its absence was believed to be that during the previous period of rampant left-wing ideology, discussing architectural art was seen as having a tinge of aestheticism, which was considered an enemy of socialist construction. The repeated mass criticisms led people consciously or unconsciously to avoid mentioning architectural art, which has had an impact even today. Wu Huanjia also pointed out that in many occasions and contexts, the term "architectural art" is used to "replace" the term "architecture" as a more ideal translation for the English word "Architecture." This suggests that the understanding of terms such as architecture, architectural art, and buildings involves the definition, value, and direction of the concept of "architecture" in different contexts. Even in the present, it remains a subject worthy of discussion and analysis.

5. Revisiting "Architectural Art": Words as Indices of History

Using semantics and pragmatics as a potential framework for analyzing the history of architectural theory, this article examines the semantic evolution of the concept of "architectural art" in China. If considering "architecture as an art" was a foreign viewpoint in ancient China, then the term "architectural art" emerged as a selective choice and semantic creation by modern Chinese architects in response to the impact of Western culture and competition within the industry. It implied an attempt to transform the traditional notion of architecture in ancient China, which regarded it primarily as a practical function and a representation of social hierarchy. After the establishment of New China, influenced by Soviet architectural theory, the concept of "architectural art" went through a complex process of being emphasized, then suddenly criticized, and even becoming taboo. By examining the meaning and translation of "architectural art" in different historical contexts, this article provides a critical interpretive framework for understanding the interconnected understanding of "architecture" and "art" among Chinese architects in the 1920s to 1950s.

Taking a perspective of semantic shifts, we discover a long-forgotten clue that points to the theoretical legacy of modern Chinese architecture. This semantic history not only helps us understand the fundamental concepts that Chinese architects continue to reflect upon but also serves as a linguistic case study, illustrating the reshaping of meaning when a word, idea, or historical period transitions from one context to another.

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Biography

Xuerui Wang is a Ph.D. candidate in the field of architectural history and theory at Tongji University, Shanghai. She was a visiting scholar at ETH Zurich (2021-2022) and an exchange student at Politecnico di Torino (2013-2014). Her research articles have been published in the Journal of Asian Architecture and Building Engineering (indexed in SCI and A&HCI) and other Chinese core journals such as the Journal of Architecture. She has also presented papers at international conferences such as ARCASIA and WPSC. Her doctoral research focuses on the intellectual history of architectural debates in 1950s China.

Renouncing or Reinventing Scale
A critical inquiry into environmental totalities

Yılmaz, İmge
Istanbul Technical University, Department of Architecture, Istanbul, Turkey, hu.imge@gmail.com
Istinye University, Department of Architecture, Istanbul, Turkey

Abstract

The sphere of living expands and reduces, and it transforms the meanings of scale. It constructs a reference system based on the bodily inhabitations. It produces knowledge and defines the epistemological categories of the environment. When adopted as a critical lens, the conception of scale leads to a wider interrogation of theories and practices of design disciplines. It summons the histories of imaginations and conditions of living, yet, not stable, it affects and is affected by them.

Contemporary experience of living is arguably characterized by an advanced level of virtualization. It enlarges the sphere of momentary information; transforms the ways of interaction with matter and materiality and eventually challenges the established hierarchies of scale. Speculative virtualization is adopted as an umbrella term to discuss the ways in which the new forms of hybrid environments shift the modes of living. It addresses the totalities of data environments that operate on a basis of constant surveying and eventually conditioning the materiality. Indicating the new forms of scapes that have become continuous surfaces of constant observation and reflection, this paper inquires the experiences of scale and its relationship with the environment.

Arguing that the conception of scale is transformed not only spatially but also temporally, the dichotomy between renouncing and reinventing is investigated in two directions: the future and the past. Within this framework, it is proposed to revisit the works of Superstudio, where the scale is adopted as a critical tool to demonstrate the capacities of an environment that could either be totalizing or liberating. Their political position and future visions open a ground to reflect on how the built forms of environment construct not only the material experiences of scale but also a temporal one. An archaeological study towards this radical group of the 60s, enables to adopt the necessary tools to critically reflect upon the transforming materiality of the contemporary experience.

Key words: scale, renouncement, reinvention, Superstudio.

1. Introduction: disclosing scale

Scale is an intangible medium through which the experiences of living are constructed. It constitutes a referential mode of thinking according to which the norms of our environment are set. The differences between the superior and the inferior are introduced as well as the differences between the singularities and the totalities. The shift in the basic conceptions about how we think, act, measure, conceive transforms the way we interact with the idea of scale. The core of the discussion in this paper is constituted by this transformation of the contemporary experience of living as it constantly deconstructs and reconstructs a ground of reference to position the self in the dimensions of materiality and temporality. Here, these two intertwined dimensions are explored and discussed as far as the idea of scale is concerned.

Crary discusses the emergent condition of a continuous temporality that is initiated by the oppressive force of late capitalist dynamics[1]. The promises of progress, development, efficiency introduce a different scale of living. He allusively asks "would not less sleep allow more chance for "living life to the fullest"?"[2]. The hegemonic regime of continuity displaces the self between materiality and virtuality. And this indicates a discrepancy between what is potential and what is real.

In a similar vein, here, the term speculative virtualization is adopted to address the vectors of change that transform the experience of contemporary environment. The emergent term indicates a critical process where the gap between the matter and the virtual is reduced; and the established paradigm of scale becomes obsolete. The term 'virtualization' refers to an epistemological regime that creates a unified condition of knowledge; and the term 'speculative' refers to a degree of critical engagement that challenges the contingencies, probabilities and coincidences in this regime. This emergent condition is arguably characterized with an inclination towards a unified conception of scale. The distinct realms of objects, spaces and scapes become included to a wider conception of a total environment. This new form of environment consists of a self-reflexive system where the materiality is constantly observed and collected in forms of data. The operation of networks become hegemonic and leaves no unrecorded moments or presents. To Crary, this regime of continuity is 'aligned with what is inanimate, inert or unaging'[3]. Thus, the emerging condition of environmental totalities disrupts the material relations at hand, and forms a ground of discussion to speculate about the temporal dimension of life and events.

The aim of this paper is to unfold the change in the meanings of scale and to discuss the temporal dimension that transforms according to it. In the following, first, the trans-scalar imagination is discussed as it enables to outline the boundaries between the fields of knowledge of different scales of living. Second, the emerging condition of speculative virtualization is discussed in terms of its weight of totalization. This transformation arguably indicates a different condition than the trans-scalar imagination since it gives rise to the idea of scale either to be renounced or reinvented. This opens a ground of speculation which is arguably shared with the radical design movement of the 60s. In this regard, revisiting the works of Superstudio is a jump-back that provides a critical lens to disclose the relationship between materiality and temporality of the built environment. Their works display how they instrumentalized the forms and scales to respond to the prevailing dualities of their time, and of today, such as design-life, architecture-environment, or totalization-liberation and so on. Remembering how they reflected on imaginations of past and future, hopefully contribute to the way we think and act in an age of uncertainties.

2. Conceptualizing the scalar shift

The centrality of human body has been the prevailing paradigm in Western thinking over the histories of renaissance, enlightenment and surely modernity. Scale is initially defined based on the measures of the body. Emmons discusses the centrality of man not only in the sense of dimensions and proportions but also its decisiveness in knowledge production. He refers to 'Micrographia', a book written in 1655 by Robert Hooke, in which described what is necessary for a reliable microscope observation: 'Sincere Hand and Faithful Eye'[4]. Here the knowledge is produced in reference to the self[5] and switching between micro and macro scales is a bodily activity. It requires an active process of trans-scalar imagination through which the bodily relationships are re-established in different dimensions. It diverts boundaries and plays within the fields that are epistemologically distinct. Thus, trans-scalar imagination may function as a framework that denotes the epistemological boundaries and also as an imaginative tool that fuses them.

The entire history of design is therefore a history of trans-scalar imagination. However, what seems critical is the change in the conception of scale as a result of a change in the contemporary experience of living. The second half of the 20th century comes forth as a period of research and speculation about the new forms of cities, spanning lands and even countries[6]. Through a plethora of design-engineering ventures, this period is characterized with an ethos of a unified planet. Some were paper architecture, some were built initiatives. The study of scale focused on the ways of expansion of the urban form as a new form of living in accordance with the technology, ecology and society. Consequently, the terminology of architecture has expanded[7] to include emerging concepts such as

territory, region, geo-architecture [8]. Architecture of the future was a field of inquiry and experimentation. The mega forms emerged with integrity of macro and micro-structures that transform territories into laid out interior spaces, favoring a homogenized built environment [9]. Goodman describes this era as a period where a conceptual change in scale took place [10]. She discusses this rupture through the examples of unforeseen technologies such as unmanned satellites as they introduced a new way knowing the planet. The weather, the atmosphere, the ground and all materiality have become parts of a total environment laid out for observation. The constant measuring, tracking, scanning, observing increased the amount of environmental information to predict what will happen next. This shaped the understanding of the environment as a medium of change for a better future. Spatial design has become an ultimate scientific profession for constructing human settlements. Everything a city could contain was to be considered, planned and scaled. Almost utopian, these models were to introduce an imagined near future. Murphy compares the 60s with today's world, in terms of their eagerness of approaching the future. He argues that, to the people of the 60s, the idea of a radically different future was much closer than it is to the people of today. The idea of an alternated future was characterized with an idea of alternated materiality. Yet, today, their imagined future seems even further from realization [11]. Similarly, Jameson argued that another form of living than a capitalist one, is beyond conceivable [12].

Today, the dominance of the virtual refers to an extra-human environment in which the measures of human body and activity neither its relations are no longer determinant in the formation of environment. The new typologies of contemporary architecture -such as data centers or warehouses are the places where the people are excluded; as well as the over scale inhuman environments such as waste landscapes, power landscapes, terminals, ports and so on [13]. Young discusses that the phenomenon of city only becomes areas of intensification, since all places are included in 'the' environment. It eventually transforms the living experience at scales of architecture, city and landscapes: Cities expand and become landscapes of information 'to describe, predict and prescribe what they see on behalf of different models.' [14]

Reflecting on the contemporary envisioning technologies that construct a surveillance system at a planetary scale, one can argue that the duality of real and the virtual collapses and distorts the modes of inhabitation. Young's short film "Where the City Can't See" depicts a kind of environment wherein the technological gaze has become a predominant power of survey and control. The film represents that all the surfaces of the urban area of Detroit are constantly being captured, scanned and mapped through the multiplicity of infrastructural systems of information, such as surveillance cameras, gps devices, urban management systems and so on. Imagining that all what makes a city smart, has eventually become oppressive and has not left an opening for getting out; the film narrates a group of people who try to find an unmapped area for escaping the omniscient gaze of the city. So Virilio's questioning of the possibility of an escape is still valid. To him, even if a spatial escape is possible, a temporal escape is not [15]. City begins not through the gates, rather with a 'fugitive anxiety' [16].

These relations between life, networks and the data they created, indicate a different conception of environment where the real and virtual have become intertwined. Virtual, beyond a medium of digitalization, refers to a degree of real but not actual, a state of 'almost' [17], therefore it includes a ground of possibilities and becomings. Reality is encompassed through mapping, scanning, surveying and copying to a degree of verisimilitude, until there will not be any difference between simulation and projection, in other terms present and future. The virtual, not only represents or simulates, but also shapes and prescribes the material experience. Neyrat questions if it is possible to unscript the future in this 'computer-based preventive societies' or could one be able to produce an alternative different than the ones in 'the catalog of frozen anticipations' [18].

3. Scale as a critical tool

The above discussion reveals that the transforming conception of scale disrupts the temporal and material experience. Scale is arguably being simultaneously reinvented and renounced through the emerging conditions of speculative virtualization. To examine this dichotomy and to understand the contingencies and constraints of its temporality, here it is proposed to revisit the works of Superstudio [19] whose approach to design critically characterizes with the reinvention of scale.

The group of young Florentine architects was among the groups of radical design movement, who approached architectural production critically and created numerous design works that raised speculations on the scales of living. Arguing that the conventional modes of production reduced architecture to mere objects of market economy; the group adopted a position of counter-design. They criticized architecture that is solely tangible, material, expendable and consumable. Architecture was in crisis, Future was in crisis, Utopia was in crisis and 'the future was no longer thinkable without irony and warning' [20][21]. In order to liberate architecture from its constraints, the relationship between the function and its image needed to be evaded. The status-quo of the dominant forces of architecture needed to be questioned and to be abandoned to subvert the limited conditions of disciplinary fields. By eliminating the conventional figurative practice of architecture, the sphere of human living would

expand. They investigated the elementary forms that would enable a new spatial thinking at different scales. The Continuous Monument (1969) and The Misura Series (1970) are the two prominent projects in which they manipulated the familiar forms and their scales to obtain new settings of environment. The comparison of the works shows the way they approached design in a critical way.

The Continuous Monument (Fig. 1) depicts an immense infrastructural surface that equally distributes the sources and provides a new base for living over the existing territories all over the planet. It is 'an architecture model for total urbanization'. The over scale grid represents a network of energy and information that reaches all places and engenders new forms of living. Underlining formlessness and timelessness, it becomes a way of materialization of the ideal and also idealization of the material. It is presented as the ultimate outcome of previous advances. It indicates an eventual destination point in a prophetic way. Yet, the narrative of the project introduces a comparably naive form of living. People are freed from all excess materials, sustain a nomadic lifestyle, having no space to reside, no belongings to carry. They happen to be wandering around for a limitless time.

On the other hand, the Misura Series [22] (Fig. 2) visualizes a living in nature appropriated only by means of some modular furnishing. This mode of living is characterized with a set of objects that are stacking units to respond to basic 'domestic' needs [23]. Scattered in nature, these objects construct unbounded spaces. Architectural form is eliminated in the sense that organizes spaces and conditions living. Instead, the capacity of limitless adaptability of objects enables an open-form of environment.
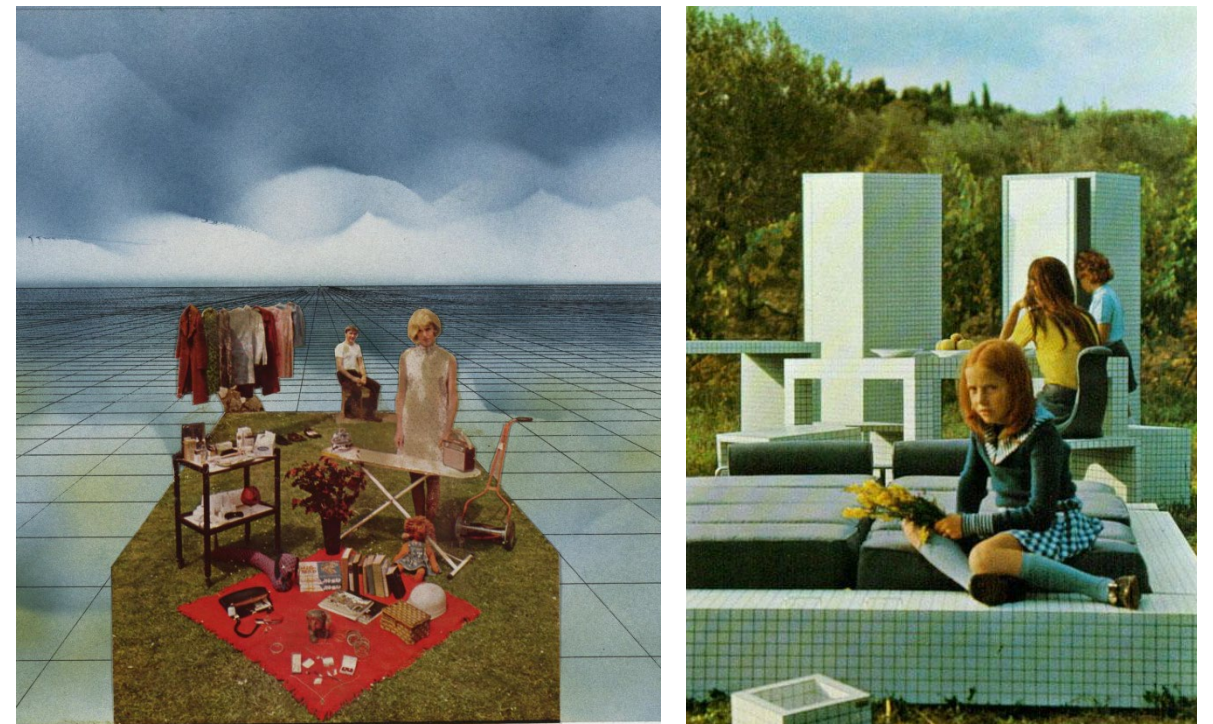

Fig 1.and Fig. 2

These works are arguably complementary as they share a similar counter-design strategy at different scales. These imaginary environments that promote an alternative living, lack an architectural scale in the sense of a bounded space. An extraordinary convergence of objects and environment, strikes the audience with the strange possibility of a creation of an open-form at all scales. Both are arguably total environments, one characterizes with an advanced infrastructure, while the other with the intact nature. However, both arguably construct an idea of the environment as the providing ground of an alternative living. Even if the scalar relations are reinvented in unfamiliar ways, both environments are where 'familiar' and 'everyday life' would take place on. In these examples, the ways of engagement with the scale, challenge the meaning of established categories and hierarchies. As the architectural form is eliminated and replaced with archetypal elements, the concept of scale itself becomes decisive to extend their capacity of trans-scalar imagination. The works of Superstudio indicate a dichotomy of liberation and totalization through the engagement with scale. The collages of the mentioned projects are not mere representations of an interesting lifestyle, rather they demonstrate that the way the scale is employed, is a process of both reinvention and renouncement. The scale of life is being reinvented as they advocated for a re-establishment of the bodily relations with materiality, at the same time it is renounced as the practices of design are abandoned.

Sharing the ethos of their era, Superstudio questioned the ethical function of architecture and urbanism as a means to either pre-condition or liberate life and future. Rather than adopting traditional methods of programming an environment, they adopted counter-scenarios about life to subvert the

norms and hierarchies of spaces. Embracing criticality is therefore what distinguishes their practice from their contemporaries. In these works, they promoted a kind of environment where the habitants would be free from the pre-determined relationships with materiality. So that the existence of an architect as an external designer is no longer required since in the new way of living, people are already architectural, in the sense that they are able to create their own surroundings. In his essay 'Invention or Evasion Design' Natalini discusses 'the problem of living creatively' and 'making reckonings with reality', and he adds 'breathing is no longer enough, and we must invent […] the utensils for doing things and find answers to new queries.' In their account, the process of elimination addresses the destruction of meaning that are prescribed by the 'great monopolies of truth.'

4. Rethinking scale
Spatial thinking inhabits the interstice between the material and the virtual, from which emanates the imaginations of future scenarios and possibilities. However, speculative virtualization as an emerging condition, addresses this interstice of possibilities with a new set of terminology in which the distance between the real and the virtual is abolished and the established paradigm of scale becomes obsolete. As the contemporary networks of data and the surveying systems shape the built environment, an extra-human condition emerges: The cities organize themselves through management systems, new data typologies emerge and function by themselves, the infrastructural landscapes operating without human intervention. The emerging condition characterizes itself with an understanding of environmental totality. This contemporary context of a technologized and infrastructural environment also indicates a totalized condition both spatially and temporally. Through continuously capturing, monitoring, scanning; the forms of environment are being translated into the forms of data. It could be argued that the increased level of virtualization becomes oppressive as it deliberately excludes the human activity to reduce the risk, the accident or any kind of unforeseen event. This emerging totality brings about a hegemonic temporality, where past, present and the future are delineated and offered as the categories of an homogenized time. On the other hand, the idea of a total environment, an infrastructural landscape is also found in the Continuous Monument as discussed above. Arguing that the life being liberated by the use of a technologized environment, the narratives represent a vivid life where people benefit from a continuous infra-structure through which all places are rendered equal. The infrastructure provides them with all their needs and maintains their high skills of communications. The reduced amount of materiality arguably helps them to break with the past, they do not escape the present but rather become capable of altering it. Therefore, the present becomes the dominant temporality. Discussed through a comparison with the ideals of Radicals, the new forms of total environments arguably shift the scale of existence not only on a spatial dimension but also in a temporal dimension. By overriding the contingencies of living, the past and the future are compressed into a wider present.

A critical inquiry into the transformation in the conception of scale demonstrates that the vocabulary of architecture and the built environment undergoes a change. The duality of the above mentioned works of Superstudio seem an underappreciated topic as they carry the necessary tools to theorize this change. When re-visited from today, with the context of speculative virtualization, these works remind us the intertwined dimensions of materiality and temporality. The above discussion demonstrates that a critical adoption of the scale could form a total environment and endorse liberation at the same time. All in all, the dichotomy of liberation and totalization indicate a crisis of future and a critical moment of reviewing the tools and vocabularies of architecture.

Notes
1 Jonathan Crary, *7/24: Late Capitalism and The Ends of Sleep* (London: Verso, 2013).
2 Ibid., 14.
3 Ibid., 9-10.
4 Paul Emmons, "Size Matters: Virtual Scale and Bodily Imagination in Architectural Drawing", *Arq: Architectural Research Quarterly* 9, no. 3-4: (2005): 230-231.
5 Ibid. The process is described as observation by hands and eyes, then memory and logic and then back to hands and eyes again.
6 This period is characterized by the debates around the forms of living and growth that occupied the theories of architecture and urbanism. A rhetoric of great numbers accompanied urban reforms at a planetary scale. The major theoretical proposals were around systemic urbanism and its constraints. See Ákos Moravánszky and Karl R. Kegler. *Re-Scaling the Environment: New Landscapes of Design, 1960-1980* (Berlin, Boston: Birkhäuser, 2017).
7 Karl Kegler, "Introduction. On Systems and System Change," in *Re-Scaling the Environment: New Landscapes of Design, 1960-1980,* eds. Ákos Moravánszky and Karl R. Kegler (Berlin, Boston: Birkhäuser, 2017), 13-20.
8 ibid. Among many substantial ideas; an expanded 'habitable region' proposed by Ladislav Zak to integrate the rural with the urban, at a transnational planning scale; 'Mitteleuropa' proposed by Frederic Neuman as a unified country of Europe; a single planetary city, introduced by Doxiadis who defended the figure of architect 'can no longer remain as a fashion designer, must become an Ekistician that is an architect-planner.'
9 Dominique Rouillard, "Superarchitecture: The Future of Architecture 1950-1970," *Journal of Architectural Education*, 67(1) (2013): 119-121. 'Mega-forms' are introduced as the pioneers of the radical counter-utopian projects. Including Friedman's Spatial City, Constant's New Babylon and Japanese Metabolists, Rouillard argues that mega-forms are liberal projects, in contrast to the -later emerged- counter-utopian imaginations.
10 Donna Goodman, *A History of the Future* (Enfield New York: Monacelli, 2008).
11 Douglas Murphy, *Last futures : nature technology and the end of architecture* (London: Verso, 2016).
12 Frederic Jameson, *Archaeologies of the Future: The Desire Called Utopia and Other Science Fictions*(London and New York: Verso, 2005).
13 Liam Young, *Machine Landscapes: Architectures of the Post Anthropocene* (Newark: John Wiley & Sons Incorporated, 2019).
14 ibid.
15 Paul Virilio, *The Lost Dimension* (Los Angeles, CA: Semiotexte, 1991).
16 İbid.
17 Rob Shields, *The Virtual* (London: Routledge, 2003).
18 Frederic Neyrat, 2018. "Occupying the Future: Time and Politics in the Era of Clairvoyance Societies" in *The Present of the Future,* eds Susanne Witzgall and Kerstin Stakemeier, (Diaphenes, 2018), 79-90.
19 The group was active between the years 1966-1978. The atmosphere of the 60s, witnessing extreme politicization not only in Italy but globally, triggered a counter-culture movement against the consumerist and capitalist politics and economies of postwar societies.
20 The exhibition 'Superarchitecture' in 1966, was the initial demonstration of their design thinking. See Maria Cristina Didero, *SuperDesign: Italian Radical Design 1965-75* (New York NY: Monacelli Press ,2017).
21 The ones that were discontent about the discipline of architecture and its extents, were not limited to Italian Radical Groups. Architectural environment, locally and globally, became critical in itself and a conceptual change was taking place through a variety of non-built forms and unfamiliar scales. Published by Hollein, in 1968, 'Alles IstArchitektur' envisioned the architecture in the broadest sense possible, by rejecting its functionalist limits. The presented montages triggered a 'what if' thinking and anything could be appropriated as architecture. He presented: "today the environment is the goal of our activities and all the media of its determinations: TV or artificial climate, transportation or clothing, telecommunication or shelter"
22 The use of Misura Series is also included in the film 'Cerimonia', the third film of the series 'Fundamental Acts'. The narrative is striking and controversial. The idea of living in nature with only some basic objects, is presented with the overtones of afterlife as the people in this place, leave their old architectural space that is buried underground, because they no longer need any objects, they climb through a narrow passage and arrive naked, they get dressed and afterwards perform their new living without a time constraint.
23 In the New Domestic Landscape Exhibition (1972), the group propagates their understanding of objects and environment. They categorize objects as either 'conformist', 'reformist' or 'contestatory'; while the environment being either 'designed', 'commentary' or 'counter-design'.

Image Captions
Fig. 1. (Left) Supersurface, Image courtesy MOMA.,
Fig. 2. (Right) Misura Series, Image courtesy Domus.

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Biography

Imge Yılmaz is an architect and a PhD candidate at Istanbul Technical University in the Architectural Design program. Her research explores the temporalities of architectural imagination and the spatio-politics of the city. She is interested in the topics at the intersection of the theories of ethics and aesthetics. She has completed her undergraduate and graduate studies in Architecture at Istanbul Technical University. She is a research assistant at Istinye University, Department of Architecture since 2019, and she contributes to architectural design studios.

Speaking of Collective Dining
The Spatial, Social and Semiotic Realities of the Kibbutz Dining Room

Zorea, Marine[1,2]
1. Kyoto Institute of Technology, Graduate School of Design and Architecture, Kyoto, Japan, marine.zorea@gmail.com
2. Bezalel Academy of Art and Design, MDes Industrial Design Program, Jerusalem, Israel, marine.zorea@post.bezalel.ac.il

Abstract

The production of a collective space was integral to establishing the *kibbutz* as an alternative social model in the 20th century. As important, was creating a spatial vocabulary by deconstructing domestic semiotic units, and scattering them over the collective terrain. The *Hadar Ohel* is one such example: enlarging the scale of the familial dining room, it maintains its premise as the center of home, providing kibbutz members with space for shared meals, intellectual exchange, and collective action. Both a term and a space, the Hadar Ohel has become an active entity shaping generations to come, reproducing the ideals based on which it was constructed. By the 21st century, most kibbutz communities had undergone various privatization processes. Amidst these transformations, what is the meaning of the Hadar Ohel today?

This article examines the material and semiotic realities inherent to the Hadar Ohel. By interviewing five kibbutz members, its changing meaning is traced through the alterations and permanences of its spaces, objects, and humans. Borrowing concepts from Actor-Network Theory, it is asserted as a substantial non-human actant in a dynamic network encompassing material and discursive realms. This case study unfolds around the axes of Fixation and Variability, In and Out, and Ordinary and Extraordinary, of which discussion demonstrates the Hadar Ohel as a liminal space where meaning is subject to constant translation but also participatory co-production.

A materialized collective discourse, the kibbutz dining room provides a peculiar albeit resourceful insight into the production of collective spaces and the ties between words and architecture.

Key words: architecture, actor-network theory, dining, home, collective

1. Introduction

Kibbutz (Hebrew: gathering, clustering; plural: *Kibbutzim*) are agricultural collectives that were formed in Mandatory Palestine in the early half of the 20th century. A living realization of Marx's postulate - "From each according to his ability, to each according to his needs," it finds its roots in socialist thought, but also in the Zionist ideal of a new Jewish society, distinguishable from the life of scholars and traders in the diaspora.[1] The first collective commune of Degania was formed in 1909 near the Sea of Galilee. Since then, kibbutzim have multiplied across the land, becoming intrinsic to Israel's formation and its subsequent politics, culture, and society.

The kibbutz is a structured social entity, and concurrently a spatial one, built to carry its societal and economic premise.[2] Its layout was initially influenced by the centralized urban planning of the Garden City Movement, itself, originally an alternative to capitalistic residential models.[3] Nevertheless, it was Bauhaus architecture, brought to Israel by former disciples, that contributed theoretical and methodological foundations to address the kibbutz's complex ideologic, social, economic and material weave during the 1940s and 1950s, the era of its demographic and spatial expansion.[4] The result was the establishment of a first-of-its-kind functional typology, where typical specialized spaces of individual urban dwellings (as of early 20th century Europe),[5] were established as collective facilities located at the center of the kibbutz terrain.[6] These buildings were planned, utilized and operated in a participatory manner by all kibbutz members,[7] as devices to fulfill and sustain its ideological utopia. In the words of Arieh Sharon, a Bauhaus disciple who played a pivotal role in the architecture of the kibbutz and Israel: "These economic, social, and ideological developments naturally affected the physical layout and the building character of the kibbutz. Architecture is, in a sense, the mirror of society, but it should not be only a reflective, passive mirror, but also an active, guiding force, directing future development of the community."[8]

Parallel to this new set of buildings, a peculiar glossary and set of architectural terms emerged. Semiotic units resonating with the domestic sphere, such as 'Kitchen' (*Mitbah*), 'Clothing Storage' (*Mahsan Begadim*), or the children's 'Home' (*Beit Yeladim*), were deconstructed to represent collective facilities and practices, such as where food is communally prepared, where clean clothes are put after being washed in the communal laundry, and where infants and children are reared together, respectively. But of most interest to our study is the *Hadar Ohel* (from Hebrew: *Hadar* - room, *Ohel* - food), the kibbutz's dining room.

The architectural term *Dining Room* has undergone major transformations throughout the 20th century. In 19th century Europe, it was used to denote a space for middle- and upper-class homeowners to socialize, while their 'servants' operated a separate kitchen, rarely attended by architects at the time. Following the subsidizing of domestic labour in the early 20th century, housewives were expected to take over domestic duties. Soon, kitchens became an attractive ground for architects who sought to introduce industrial values into the domestic sphere, resulting in modernist typologies such as the Frankfurt Kitchen, featuring an efficient spatial arrangement and novel electric devices. The kitchen thus became a functional space while the dining room maintained its leisurely and social meanings. With the nuclear family rise in significance in post-war western Europe and north America, dining gradually took place in the kitchen, and by the 1970s the wall was lifted between the kitchen and the dining space, making the Kitchen-Dining a central symbol of the private domestic sphere, on both its practicalities and rituals, as well as a representation of the household's social status.[9] Contrasting the individualistic dining room, the Soviet dining room (Russian: *Stalovaya*) is another term of interest for this paper. Conceived in the 1920s and sustained throughout the Soviet regime, *Stalovaya* were local collective canteens absent of gender or class division. They were made to provide the Soviet worker with their "necessary material conditions", but perhaps more importantly, these facilities allowed the soviet regime to transmit its ideology through daily practice, in order to generate the "new soviet person".[10]

Stemming amongst these terms, the Hadar Ohel has always been a relatively large, sturdy and centrally located space. While these structural and orientational qualities initially rose from the necessity of providing 'Food' for working members, they afforded the realization of kibbutz ideology through a 'Room' for collective gatherings, holidays, essential discussions and communal votes (fig. 1).[11] It was not until the 1960s, however, that the Hadar Ohel's physical structure was built to match its emblematic status: then, many kibbutzim replaced the shack used for dining with a multi-purpose building complex that included kitchen, serving and dining areas, an adjacent 'Comrade Club' where members could discuss and socialize, a theater, and surrounding grass fields where communal celebrations and events took place. Soaring in the backdrop of the kibbutz's functionally-driven architecture, Hadar Ohel buildings are broadly distinguishable by their brutalist design, and while their functions were largely standardized, each one was designed to reflect its respective kibbutz's identity and value system.[12] In this way, the Hadar Ohel has become an icon, synonymous with the kibbutz's spatial, social, and ideological center.

By the 21st century, most kibbutzim underwent radical organizational and economic changes, varying from privatizing communal services to members' differential earnings and the leading of economically

independent lives. Today, many Hadar Ohels serve food for profit, while others stand still and empty. Stripped of the context that inscribed its formation and of which it constituted an indispensable part, what is the current meaning of the Hadar Ohel?

Fig. 1

An interesting methodological lens from which to examine this question is Actor Network Theory (ANT), where human and non-human actants, such as living beings, artifacts and spaces, are thought of as active agents, forming dynamic networks of associations. According to ANT, actants are "not simply the hapless bearers of symbolic projection":[13] all actants are capable of acting, affecting and producing meaning, and networks form through their materially and discursively heterogeneous relations.[14] Rather than a theory, ANT is considered a family of material semiotics, "a set of tools and sensibilities" for exploring the formation of those networks "that are simultaneously semiotic (because they are relational, and/or they carry meanings) and material (because they are about the physical stuff caught up and shaped in those relations)."[15] While all actants in the network have the agency of defining their associations with one another, sometimes the process of translation occurs. Callon writes, "Translation involves creating convergences and homologies by relating things that were previously different".[16] Translation happens when actants in the network are persuaded by others or made to believe in certain common definitions.[17] This process converges and fixates the associations within a network, and so "the identity of actors, the possibility of interaction and the margins of manoeuvre are negotiated and delimited".[18] Translation therefore renders actants the power to define the associations between others, so they may match their interests.

ANT scholars have emphasized its potential in architecture as early as the 1990s, and its perspectives and methodologies have since been applied in multiple architectural research projects.[19] Its non-hierarchical ontology resonates with that of the kibbutz. Furthermore, its emphasis on the dual role of spatial artifacts - simultaneously a territory produced through associations between actants, and a material actant with which other actants associate,[20] is compatible with architectural study of the kibbutz, a term indicating a social organization and a real location alike. Finally, ANT's analytical approach to understanding the ever-changing production of meaning is an interesting methodological ground for inquiry into the entangled realities of the Hadar Ohel and its changing meanings.

This article takes an ANT approach, typically revolving around an empirically grounded case study,[21] in this case, around the Hadar Ohel of kibbutz Maagan Michael. Built in the early 1970s, it has since been extended and later went through interior renovation following its privatization. For the purpose of this study, we engaged five kibbutz members and members' children who have known the Hadar Ohel since childhood, that they may describe their experience with the Hadar Ohel: specifically, the main entrance, serving and dining areas within the general complex. By analyzing their relations with the Hadar Ohel's space, artifacts, humans and the meanings of these associations, the discussion unfolds around three axes: Fixation and Variability, In and Out, and Ordinary and Extraordinary. Throughout the discussion, this essay depicts how the timeless definition of Hadar Ohel as a collective space, as well as its changing meanings, are constructed and mediated by human, artifactual and spatial actants. The Hadar Ohel space is demonstrated as a capable actant and concurrently as a network containing humans, objects, machines and spatial elements, smells, tastes and noises, economic forces and ideological beliefs, where contradictory meanings exist interchangeably. It is revealed as a liminal place in-between translation and participatory co-production, where meanings are in constant negotiation.

The kibbutz dining room, and that of Maagan Michael, is a rather specific architectural case study. Nevertheless, this initial inquiry into this collective space and concept may provide insight with regards to current challenges faced by the field of architecture. I hope this study sheds some light on the elusive construction of collective space and its meanings.
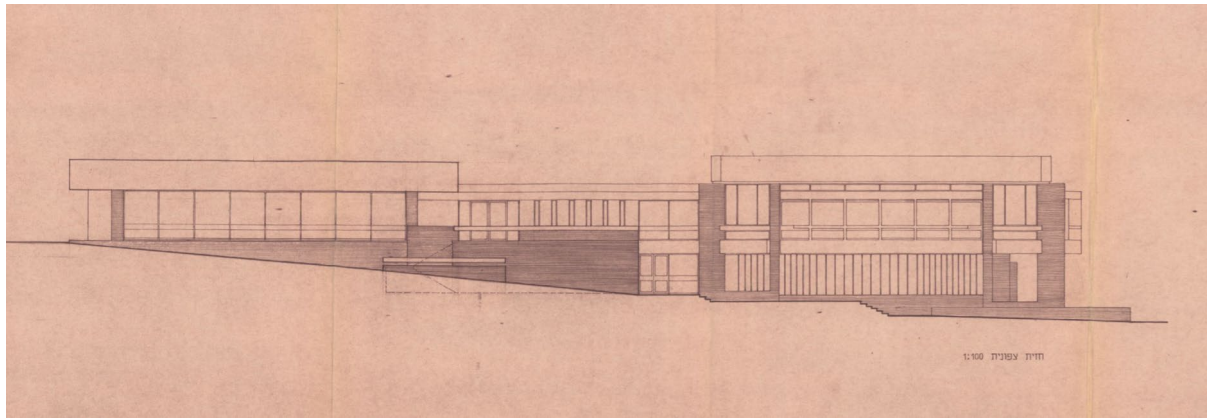
Fig. 2

2. Site and Methods
2.1. The Hadar Ohel of Maagan Michael - A Brief History
Maagan Michael was founded in the early 1940s by a group of approximately 20 members, and moved by the shores of the Mediterranean Sea in 1949. It has since grown into a population of about 2100 inhabitants, around 950 of which are kibbutz members. The remainder include members' families, contemporary residents and employees.

The focal point of this study is its Hadar Ohel, built in its current location and form early in the 1970s by architect Yehuda Feigin, a brother to one of the kibbutz's founders. At the time of its building, it included two levels: the upper, including an entrance hallway, a small dining area, serving area, and kitchen, and the lower level, including an elongated passageway, a theater, and a Comrade Club to which the building extends (fig. 2). Spacious grass fields surround the Hadar Ohel and are considered part of the complex. It is located at the center of the Kibbutz, and is surrounded by common facilities such as grocery stores, a communal laundry facility, the Clothing Storage, and the post office. In the early 1980s, following demographic growth, it was extended to include a second dining area south of the former one, utilizing similar materials and structural forms but on a larger scale. Underneath, a large amphitheater was built, and the existing passageway was elongated. Following a decision by kibbutz members to privatize the Hadar Ohel in 2006, and the introduction of a fiscal compensation model that did not exist thus far, the serving area underwent both renovation and reorganization. Multiple new serving stations were brought in and positioned around the serving area, in contrast to the former uniform elongated serving wagons. The renovation included the introduction of cashiers and a pathway leading to it. On the material level, the former metal serving surfaces were replaced with colored marble, and excluding the dining area, all floors on the upper level were replaced with colored tiles - as opposed to the original black and grey terrazzo flooring.

The Hadar Ohel used to host three meals a day, seven days a week. Nowadays, the opening hours decreased, and dinner is served only on Friday nights (Shabbat).

In this study, we will concentrate on this building and its metamorphosis through the years. While inseparable from the complex and the Kibbutz as a whole, the scope of this study focuses on the main entrance hallway (approx. 430 sqm), the serving area (approx. 130 sqm) and dining areas (approx. 950 sqm) found on the higher level of the complex.

2.2. Participants
The recruitment aimed to represent a wide range of ages, habits, and social practices related to the Hadar Ohel. This study interviewed five people ranging in age from mid-20s to early 70s. Four participants were born in Kibbutz Maagan Michael, two are second-generation Kibbutz founders and two are third. One participant joined as a young child from another Kibbutz in the 1950s. Three identify as women and two as men.

2.3. Method
ANT shares with ethnography the emphasis on everyday practices such as actions, activities, and behaviors, and the environments, materials, and symbolic systems intertwined within these practices. Both study the active processes by which people give meaning to the world and approach them with sensitivity to heterogeneity and multiplicity.[22] In light of these similarities, the data comprising this case study was collected through ethnographic interviews of around 60 minutes.

The interviews were semi-structured, so while some pre-determined aspects were discussed in depth, the conversation enabled participants to conjure memories, thoughts, and free associations. The structure of the interview included questions regarding interaction with and perception of the material aspects of the Hadar Ohel - its objects, machines, spatial components, as well as the food itself. Particular attention was dedicated to affordances, the possibilities of action in one's everyday

environment and objects,[23] entailed either by form or by sociocultural practice.[24] Participants were further asked about aspects of human relations, whether interpersonal or communal, and lastly, for their definition of the Hadar Ohel and its personal meaning to them, as well as about the changes it may or may not have undergone.

The data was then transcribed and translated from Hebrew into English. This case study is built around three thematic axes, emerged through an inductive thematic analysis on the data where the data guides the analysis process.[25] These axes are thereby described.

3. Emergent Themes and Discussion
3.1. Fixation and Variability
"The design is quite meager. But from this meagerness, blossoms the social interaction." - participant in her 30s

The long tables in the dining area exemplify the kibbutz realization of socialist ideology. Made to accommodate 18 people at once, they afford members the timely sitting together and association with one another (fig. 3). As one participant, in his 70s, recounts: *"There are the usual tables. Each 'parliament' group has its table."* The tables imply, or even force, specific seating arrangements - but in turn, produce a multiplicity of interpersonal associations between its human actants. Therefore, these uniform furniture mediates meanings beyond food or the act of eating and contribute to the translation of the Hadar Ohel as a place for communal gathering.

Similarly, the limited pre-privatization food menu (*"food for the poor, for the proletarian"* – participant in his 50s), which is now abundant and varied, generated various human interactions. Buns served exclusively on Mondays were a *"celebration"*. A salad made daily by a founder for his granddaughter and her classmates while sitting at their table became a *"famous salad" (participant in her 30s)*. Other participatory and playful improvisation recalled by this participant include *"a communal salad"* caught and eaten together from a tray, or *'chocolate pudding'* she and her friends made of white cheese and cocoa powder. These nutritional actants, while relatively uniform and meager, played a part in co-defining the Hadar Ohel as a space for play and recreation. As shared by one participant in her 20s: *"Flavor was not important, it was not supposed to be fun … But the Hadar Ohel was a good hangout, even without intending to be."* However *"meager"*, these uniform material actants of the Hadar Ohel produced precious processes of *conviviality*, where creative associations are autonomously generated among humans and within their environments. In Illich's words, people need "above all the freedom to make things among which they live, or give shape to them according to their own shape, and to put them to use in caring for and about others."[26]

Another steady material actant inviting plural interactions is the entrance hallway and its informational functions. In the past, this area featured the only radio and television in the kibbutz, and it includes bulletin boards to date. However, some participants noted the information gathered at the Hadar Ohel is of social character: *"It is a place for information. Our senses in the Hadar Ohel are not those of food or taste, but social senses."* (participant in her 30s). The entrance hallway is described as instrumental to such information exchange: its inevitable location in the building layout makes it an obligatory passage to the serving and dining areas, its long structure encourages passage and movement, and it is spacious enough to host multiple greetings and casual conversations. This unchanged buffer space then contributes to the translation of the Hadar Ohel as a lively space for passing information. As one participant in his 70s described: *"I sometimes enter the Hadar Ohel, not to eat: I go, I pass … have a quick tour to have a look, pass by the bulletin board to see if there's something new, and swoosh, get out."*

In some artifacts, consistency over time generated various affective depictions. Some members, for instance, refuse to use the new trays introduced in recent years to the so-called "*Hadar Ohel eating utensils set*", titled by a participant in her 20s, that had remained unchanged for the past 20 years (fig. 3). One participant fondly recalls the old chairs, describing their wooden materiality as heavy, comforting, and homey (compared to new ones, made of light plastic and plywood). Of withstanding material and spatial invariability are the Hadar Ohel building itself and its central location. These properties have been essential in inducing definitions such as the *"center of life" (participant in her 20s)* or *"of the community" (participant in her 60s)*, *"home" (multiple)*, and *"heart" (participant in his 50s)*.

It is possible that the Hadar Ohel's tension of uniformity and variability has roots in architectural modernity that is "enmeshed in two opposing stances: one of efficiency and instrumentalization of reason and the other of open structures, connectivity, and transition".[27] However, what is interesting about the Hadar Ohel's functionally driven, uniform material actants is that they induce social multiplicity - in the formation of familial associations between human actants, in the invention of common activities and practices, and affective meanings. Space here is not open and limitless, and at the same time does not dictate a specific set of actions. Its translation as a shared space is not achieved solely through material actants but is dependent on the unpredictable, inventive and

participatory performance of others. Architecture here is not an imposed static object, but can rather be described as a lively and transformative ecology,[28,29] where fixed material actants are designed to be extended through multiple associations between human actants and otherwise. This unique plurality of the Hadar Ohel resonates with Walter Benjamin and Asja Lacis concept of *porosity*: "As porous as this stone is the architecture. Building and action interpenetrate in the courtyards, arcades, and stairways. In everything they preserve the scope to become a theater of new, unforeseen constellations. The stamp of the definitive is avoided. No situation appears intended forever, no figure asserts it is thus and not otherwise."[30]

Fig. 3

3.2. In and out
"(Hadar Ohel) is a room inside of the general home called kibbutz." - participant in his 50s

As a 'Home' that is located outside, the Hadar Ohel conjures a material and discursive tension of in and out. On the one hand, it has always been an inclusive space, inviting in all comrades, regardless of age or occupation. As told by one participant in her 60s: "*Each would come with their clothing, their agricultural occupation, their smells…*" On the other, the privatization was followed by the introduction of external monetary concepts, artifacts, and human actants to the Hadar Ohel, and by practices of confinement and exclusion.

In the past, all dishes were accessed freely from stainless steel gastronomes. Nowadays, however, main dishes are positioned in a closed section behind glass plates, and served by employees. Some dishes are now packaged inside boxes in prefixed quantities. One participant in her 20s describes: "*From a dish put in gastronomes among others, it becomes a dish enclosed within small plastic boxes …*". Previously tangible dishes are now positioned in enclosed borders made of glass and plastic, from which members are excluded. These material boundaries mediate the translation of food, a core element in Hadar Ohel's *res communis* - the common-pool resources shared by the community - as a monetized commodity.[31]

Material actants of the Hadar Ohel not only contain food, but also humans: partitions made of walls, food serving wagons and coffee machines surround the serving area, generating a designated path where the utensils stand is defined as 'entrance', and the cashiers an obligatory 'exit' passage. Those confining spatial and artifactual actors mediate external economic and cultural meanings: "*At first, the renovation seemed like a hotel*" (participant in her 30s), and "*it is a wonderful restaurant*" (participant in her 60s). The interior renovation of the serving area has been indispensable to translating the Hadar Ohel as a profit-oriented facility. As shared by a participant in her 20s, "*The renovation of the Hadar Ohel inaugurated its privatization.*"

Another in and out tension manifests around the Hadar Ohel's operation. One participant in his 50s shared: "*The Hadar Ohel is not a word, it is a term. It (describes) eating there, doing duty rosters, working there.*" Since its beginning, members not only utilized but also operated the Hadar Ohel, and were therefore familiar with its various corners, cooking machinery and fridges, to which they had uninterrupted access. Sneaking together at night to the kitchen, taking food from those fridges and "*opening a table*" (female participant, 30s) was common among youth. These practices reflected the community's ideology and culture. Nowadays, members are restricted from entering the kitchen, despite it being structurally accessible. External employees have joined the network, and while their movement isn't confined, participants feel an external class system was introduced to the previously equal space. Some participants shared: "*it is no longer a free space*" or, "*not my place, not my home anymore.*" It is not the introduction of external employees so much as the translation of the relations between these new employees and members with the external concepts of 'Service Personnel' and 'Customers', and the redefinition of each's margins of manoeuvre that has disturbed participants.

The Hadar Ohel manifests a paradoxical tension of in and out: in some cases, its spatial inclusion mediates the meaning of care and protection, resonating with Gaston Bachelard's *poetic image*, at once material and poetic, describing the manners in which roofs, basements, corners, and drawers are endowed by inhabitants with the perceptible meaning of 'shelter' that is the 'home'.[32] However, when such spatial inclusion interferes with members' freedom and manoeuvres their actions, it may mediate the meaning of boundary and confinement. Furthermore, in ANT perspective, inhabitants are not the only actants capable of transforming an architecture: it is changeable by all those frequenting it and residing within it.[33] Whereas in the case of Hadar Ohel's longterm inhabitants - kibbutz members - uninterrupted spatial access means inclusion, for employees this access makes tangible their social and economic exclusion. This tension gives rise to critical considerations of architectural circulation and partition, to be taken when designing a truly collective space.

3.3. Ordinary and Extraordinary
"There's something rather enjoyable about ascending from the fields or the groves, after working one's tail off since the early morning …" - participant in his 50s

The word *ascending*, used to describe the way to the Hadar Ohel, holds an ordinary meaning and also an extraordinary one. The above participant truthfully describes the topology of the kibbutz: the Hadar Ohel is, indeed, located atop a hill, surrounded by a lower level of dwellings and educational facilities, while agricultural groves and fields are located on the kibbutz's lowest terrain. At the same time, "*ascending*" (in Hebrew: Laalot) denotes a spiritual pilgrimage, or more specifically, "*ascending*" to Jerusalem - itself located on mountains. Other participants elaborated on this idea through the analogy of the Hadar Ohel and the synagogue (of which etymology in Hebrew is 'gather'), with one saying: "*Each community has its own belief, its own special building, whether a church, a mosque, or a synagogue*" (participant in her 60s). The word "*ascending*" is often articulated by members without uttering the term 'Hadar Ohel': "*Once school is finished, everybody ascends together*" (participant in her 20s). It is clear to all comrades that there is only one place on which to ascend: the top of the hill, the spiritual core of the collective. Both Jerusalem and the Hadar Ohel encompass, even transcend, social and material associations in their meaning. In the words of social geographer Doreen Massey: "What is special about the place is not some romance of a pre-given collective identity or the eternity of the hills. Rather, what is special about place is precisely that thrown togetherness, the unavoidable challenge of negotiating a here-and-now … and a negotiation which must take place within and between both human and non-human."[34]

The original premise of the Hadar Ohel has transformed over the years. The individual home gradually became the focal point of everyday living, especially following the introduction of familial (as opposed to communal) child rearing in the early 1980s, and the Hadar Ohel's privatization, resulting in larger and fuller individual kitchens and dwellings. In the words of one participant in her 20s, *"The Hadar Ohel is the scattered functionality of home, when the home already has everything you need."* And yet the dining room remains a space of unique significance to kibbutz members. This liminal state manifests in participants' associative metaphors to the Hadar Ohel today: one described it as an "*anchor*" or a "*backup*"; a place tied to her past that she wishes to preserve in order to secure the future; another described it as a "*mirror of one's personal situation*" reflected by the gaze of others; one person defined it as an exterritorial space, "*an island … an autonomy, belonging to everybody, but has its own rules*", while another as a hybrid organ: "*The beating stomach of the community*", adding, "*Before, it was a bit of heart.*" The Hadar Ohel is a hybrid space in constant translation, moving interchangeably between the quotidian and transcendent, present and past, sameness and otherness - in processes occurring in-between actants, but also within actants themselves. If the kibbutz was founded as a living and materialized utopia, the Hadar Ohel today is, perhaps, a Foucauldian *heterotopia*: "Places that do exist and that are formed in the very founding of society - which are something like counter-sites, a kind of effectively enacted utopia in which the real sites, all the other real sites that can be found within the culture, are simultaneously represented, contested, and inverted."[35] As in *heterotopia*, the Hadar Ohel is an existing physical space, frequented daily by human actants and inhabited by constant artifacts. Yet it is an extraordinary space of which alternating meanings are proliferated through the entangled social, material and semiotic conditions within which it exits.

4. Conclusion
The spatial and symbolic center of home, Hadar Ohel bears a resemblance to the emblematic familiality of the individualistic 'Dining Room' discussed in the introduction. Parallely, the Hadar Ohel compares to the Soviet dining room, forming a functional and social device within a collective ideological system. But the Hadar Ohel neither revolves around a pre-existing family unit as does the former term, nor is it conceptualized as part of the unidirectional bequeathing of political values and rules as the latter. Rather than a predetermined description, Hadar Ohel is demonstrated here as a

capable spatial actant as well as a dynamic network, of which material and symbolic weave are in continuous reconfiguration. It is an instance where architecture forms a vital force in the construction and deconstruction of familial relations or common conventions, affecting, in turn, architectural meanings.

Future work may expand this paper's scope to include the Hadar Ohel entire complex, its location in the kibbutz and perhaps other kibbutzim. Nevertheless, this study sheds first light on the constant translation of the Hadar Ohel as one entity or another, and the continuous co-production of meaning through associations between its heterogeneous actants. This fluid definition of the Hadar Ohel renders a constant liminal state: this space is neither fixed nor varied, neither inside nor outside, neither ordinary nor extraordinary. Perhaps for this reason it may be best interpreted through liminal spatial concepts encompassing materials and symbols, such as Bachelard's *poetic image*, Benjamin and Lacis's *porous* or Foucault's *heterotopia* - at the same time imaginative and ephemeral, and yet concretized and real.

The particular case of the kibbutz dining room is potentially relevant to architecture nowadays. The entangled ties between its human and material actants may contribute to understanding humans' relations with (and definition of) spaces and artifacts in built environments, a topic which poses a challenge today.[36] Furthermore, as a functional building type on the one hand and the host of unpredictable associations on the other, it provides hints towards endowing urban built environments with openness and conviviality with which they occasionally lack.[37,38] The material mediation of codes and values within the Hadar Ohel can be of critical consideration for architects and scholars tracing the spatial manifestations of social conventions applied and constructed within shared spaces.[39] And finally, the affective, at times transcendent collective meaning of Hadar Ohel, withstanding major transformations in the configuration of its spatial and artifactual resources, its social practices and codes - put forth the significance of participatory spatial conceptualizations, co-produced through cooperation and shared habit, play and ritual.

How can one read the architectural elements making a collective space, such as the kibbutz dining room? What actants and their qualities possess the agency of redefining a space as collective, what entanglements make such definition timeless? Such questions form an intriguing point of departure for future research on the participatory construction and definition of space.

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Image Captions
Fig. 1. Kibbutz Maagan Michael members' communal committee at the Hadar Ohel, 1970s.
Fig. 2. Original west elevation drawing of Maagan Michael Hadar Ohel complex. The long entrance passageway on the left is followed by the smaller dining area on the right.
Fig. 3. Left. kibbutz dining room's eating utensils. Right. members sit together for lunch at the collective elongated tables.

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Biography

Marine Zorea is an artist, researcher and designer based in Japan and Israel. She holds a BA in Psychology from Tel Aviv University and MSc in Product Design from Kyoto Institute of Technology, where she currently pursues her PhD research on interaction design for objects of the domestic sphere. She currently teaches design research methodologies at the Masters Program in Insudtrial Design at Bezalel Academy of Art and Design, Jerusalem. Zorea is third generation to kibbutz Maagan Michael founders.