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Architecture Archives of the Future

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Jaap Bakema Study Centre

ARCHITECTURE ARCHIVES OF THE FUTURE

Tenth Annual Conference
November 2023

Architecture Archives
of the Future

Nederlands Documentatiecentrum voor de Bouwkunst ("Netherlands Documentation Center for Architecture") in Amsterdam, one of the predecessors of Nieuwe Instituut. Collection Nieuwe Instituut, Archive NDBK

Dirk van den Heuvel (Head of the Jaap Bakema Study Centre)

Looking Back, Looking Ahead: Ten Years Jaap Bakema Study Centre

This year's annual conference marks the tenth anniversary of the Jaap Bakema Study Centre, the special research collaboration between the Nieuwe Instituut and the Faculty of Architecture and the Built Environment of TU Delft. Looking back to 2013 this seems like another era, and yet at the same time it also feels as if we've only just started. In the early Spring of 2013, I was approached by Guus Beumer, the then freshly appointed director of the Nieuwe Instituut. The Nieuwe Instituut itself was a wholly new creature, the result of a merger between the Netherlands Architecture Institute, the Premsela design institute and Virtual Plaform, the digital culture institute. It was the outcome of a new right-wing cultural policy in the Netherlands, and much contested as such. One of Beumer's ambitions was to embed the Nieuwe Instituut in larger, multidisciplinary networks to try and fend off future reorganisations motivated by ideological agendas. Among others, he was interested to bring academic research and design expertise as represented by the Faculty of Architecture and the Built Environment at TU Delft to the Nieuwe Instituut. Together we came up with the idea for the collaboration through the Jaap Bakema Study Centre, a versatile and small unit situated between Delft and Rotterdam, to facilitate exchange, and to combine research and the national collection of architecture and urban planning at the Nieuwe Instituut to create a programme of public activities focused on urgent societal questions.

To name the collaboration after Jaap Bakema (1914-1981) was a logical choice for many reasons. The archive of the Van den Broek & Bakema office and its equally famed predecessor of Brinkman & Van der Vlugt is the largest archive in the collection and holds some of the prime architectural projects of Dutch architectural history, among others the Lijnbaan shopping street in the rebuilt centre of the war devastated city of Rotterdam. As a professor in Delft, and an architect in Rotterdam, Bakema also embodies the combination of both places. More importantly, Bakema represents an approach to architecture, which had gone lost under the impact of postmodernism and neo-liberalism in architecture. For Bakema architecture as a discipline exists only in the middle of society and its messy state of ongoing 'growth and change', one of the key mottos for modern architecture in the post-war decades. Architecture was to address society's needs and desires, or it should not exist at all. Architecture as autonomy was never an option for Bakema. He proposed to think of architecture as fundamentally relational, already in 1951 at the CIAM conference in Hoddesdon, which is quite different from promoting cultural or ethical relativism it must be added. Social questions belong to the question

of architecture. Bakema's proposition to build towards an open society, in which people are enabled to live by their own convictions and aspirations was founded on this believe. The notion of an open society, as a question rather than a fixed agenda, turned out to be also an excellent guideline for the development of the public activities of the Jaap Bakema Study Centre.

EXHIBITIONS AND RESEARCH

Initially, the focus was on the creation of exhibitions as output of research as well as a vehicle for ongoing investigations. In 2014, the Jaap Bakema Study Centre curated the Dutch Rietveld pavilion at the Venice architecture biennale and restaged Bakema's contributions around the question of an open society as a guide line for architectural design and urban planning today, two years before authoritarianism ad populism regained new momentum with the election of Donald Trump as president of the USA, and the Brexit vote in the United Kingdom. In Rotterdam at the institute we co-curated the Structuralism show, together with Herman Hertzberger and the colleagues of the Nieuwe Instituut, especially Suzanne Mulder and Ellen Smit. It focused among others on the relevancy of architectural design regarding social interactions for today. Other exhibitions were produced with young emerging architects, such as the Belgium office of Rotor based on a research studio at TU Delft around re-use and Dutch architectural icons like Hertzberger's Ministry for Social Affairs and Employment which will be demolished, and with Studio Ossidiana on notions of ecology, biodoversity and more-than-human design, especially birds. A very special exhibition was developed together with the Calouste Gulbenkian Museum in Lisbon, at the invitation of its director Penelope Curtis, to look into the specifics of exhibition design and museology of the mid-twentieth century. Selected designers we restaged included Franco Albini, Lina Bo Bardi, and Aldo van Eyck. Parallel activities involved research by students of the Berlage, including a master class on museum and exhibition design with Barry Bergdoll. While in Lisbon Rita Albergaria sought to develop carefully designed reconstructions of the selected displays, for the Rotterdam edition Jo Taillieu chose instead to approach the question of scenography as a question of translation of the original displays, which resulted in a constellation of fragments that together built up into a most poetic and contemporary experience for the visitors.

All exhibitions were research driven and also instigated new research. They were archive based, and often linked to new archival acquisitions for the national collection. Students were actively involved, as well as designers, all in order to bring out the archival materials, to make public the ideas and traditions which they carry, and to confront these with the questions of today. This research dimension of the programme of the Jaap Bakema Study Centre resulted in a shifting focus from exhibition making toward accommodating guest researchers, postdoc fellows and PhD candidates, even complete PhD networks. Around the question of an open society the ongoing PhD programme Architecture and Democracy was initiated, together with TU Delft

colleague Jorge Mejía. Burcu Köken works on architectural media in the Cold War decades, and Íñigo Cornago Bonal is looking into housing design, user agency, and the concept of Open Building. A second, national PhD programme with parallel work packages concerns The Critical Visitor project for 2020-25; it's NWO sponsored, and initiated by Eliza Steinbock, together with Hester Dibbits and myself. A consortium of circa 15 cultural and academic institutions looks into questions of intersectional diversity and inclusion in the world of heritage, especially museums and archives. A third PhD programme with a consortium of ten universities, and various cultural institutions and architectural firms has been completed last summer: Communities of Tacit Knowledge: Architecture and its Ways of Knowing (TACK), led by Tom Avermaete, ETH Zürich, and Janina Gosseye, TU Delft. It's EU funded, and brought together ten PhD candidates who also visited Delft and Rotterdam for seminars and a two week summer school, while four of them were hosted for research secondments.

DIGITAL TURN

While PhD research and hosting postdoc fellows and visiting scholars will remain crucial to bring the archival materials out for new research and new audiences, another dimension of the activities of the Jaap Bakema Study Centre emerged quite prominently during the last decade as crucial to future architectural research and knowledge: that is the ubiquitous new digital technologies, their histories and entanglement with architectural design, as well as their almost autonomous impetus toward new and unexpected developments in archival studies and curatorial practices. This 'digital turn' can be easily retraced from the themes addressed by the series of annual Bakema conferences organised in the last years: three out of ten conferences were exclusively focused on the digital turn in architecture and archival studies, while also this tenth edition of the Bakema conference will be dominated by questions of digital technologies and their evolving uses. In 2016, we devoted the conference Between Paper and Pixels to the topic of transmedial traffic in architectural drawing, with a pop-up exhibition of all sorts traces of the digital in the archives of the national collection, from the first plotted drawing for the Siemens research centre by Van den Broek and Bakema to the black box of so many terabytes of the digital archive of MVRDV. The conference was concluded with a wonderful keynote by the late Will Alsop. In 2020, we looked at prehistories of the digital again, under the heading of Repositioning Architecture in the Digital, organised together with Georg Vrachliotis. And in 2022, also with Vrachliotis, we focused on Building Data: Architecture, Memory and New Imaginaries.

This focus on the digital was not anticipated at the start of the Jaap Bakema Study Centre. Yet, various parallel developments made this a natural outcome and new direction. First of all, there was the Covid-19 pandemic, which forced us to move the institute's public programme to the realm of on-line events and presentations. An early test with 3D photography of the Habitat exhibition, to create a hybrid platform that could integrate archival documents with

research and online exhibition visits, was now made public for instance. It accelerated the idea to explore the possibilities a global, multi-institutional platform for a Virtual CIAM Museum, to bring together the dispersed CIAM archives in a new medium that would allow new ways of doing research and new ways of knowledge production and dissemination. Together with PhD candidates from the TACK network, who also had to be most inventive due to the limitations of the pandemic, we tested various prototypes: a remote field work exercise with Jhono Bennett with the Lijnbaan as an example, a test for a interactive visualisation of Jaap Bakema's correspondence network with Claudia Mainardi, and a VR installation as a reconstruction of the work room and archive of Alison Smithson, proposed and designed by Paula Strunden.

PROTOTYPES

Working with prototypes allowed for a controlled development of potentially very big projects, and a learning experience for the team and for the institute, in terms of working with the technology, the necessary time planning and funds, related archival work (digitisation, curation of data sets, etc.), but also in terms of testing new audiences and new narratives. Especially Paula Strunden's VR installation Alison's Room: An Extended Reality Archive turned out to be most succesful. Not only could everyone themselves literally experience the new possibilities, which made the conversation about VR and its possibilities much more concrete, but it also brought quite surprisingly new audiences due to the selection for the Gouden Kalf awards of the Dutch film festival in the category of digital culture, which meant the installation travelled to Utrecht, and to the Rotterdam Architecture Film Festival, too.

The prototypes were presented in November 2022 at the conference of Disclosing Architecture (Architectuur Dichterbij) at the Nieuwe Instituut, which was the platform for a bigger multi-million euro project, sponsored by the Ministry of Culture, that aims at new ways of preserving our archives, and new ways of disclosing them, in particular through digital technologies. Ever since the start of the Nieuwe Instituut, the digital had become a natural field of exploration, since one of the original institutions behind the merger was Virtual Platform. Hence, a range of experiments with visualisations in particular were consistently produced. For instance, in the context of the Structuralism exhibition, artist and designer Richard Vijgen proposed new archival interpretations based on metadata software (Adlib) to rethink interfaces and relations within the collection holdings. Thus, the Nieuwe Instituut, as an interdisciplinary organisation by definition, provides the natural context to further expand the experiments with the digital turn in architectural archives and curation. It is the ambition of the Jaap Bakema Study Centre, together with the Nieuwe Instituut and TU Delft, to further develop the Virtual CIAM Museum as an umbrella project in the coming years, together with other international partners, starting with the GTA institute of the ETH Zürich, and the Getty Research Institute.

A NEW GROUP

To better support the work of the Jaap Bakema Study Centre in the coming years, a new group has been formed within the Department of Architecture at TU Delft, which I proudly present here: Architecture Archives of the Future to further focus the research and innovative work in the field of digital technologies, architectural archives and curatorial practices. The new group will work within a newly formed section Building Knowledge which also hosts the groups of Kees Kaan, professor of architecture and leader of the Complex Projects group, and Georg Vrachliotis, professor of digital culture and leader of the group Data, Design and Society. This tenth edition of the annual Bakema conference of the same name is the informal kick-off of the group, which was latently already active under the wings of the group of Architecture and Dwelling, which I led in the last years as well. The new group will be much more prominently visible and able to develop its own programme, and also its own courses, starting with a MSc studio devoted to the design of a Virtual Architecture Museum, in which students will engage in new ways in architectural design research, presentation and experience.

The group already consists of eight people in total, I'm very happy to announce, all of who I highly respect for their dedication to architectural research and education. Alejandro Campos Uribe was initially a Marie Curie postdoc researcher, but has now a position as lecturer and researcher. Our group benefits from the Spanish Margarita Salas foundation, which funded two postdoc fellowships held by Paula Lacomba Montes and Elena Martínez Millana. Burcu Köken and Íñigo Cornago Bonal are PhD researchers as part of the Architecture and Democracy programme. Winnie van de Sande is our most excellent student assistant, while Fatma Tanış is the crucial hingepoint for the Jaap Bakema Study Centre, working between the Nieuwe Instituut and the Architecture Department.

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Silodam typological iteration generated by Bing Image Creator. Image courtesy of Xavier Van Rooyen.

Xavier Van Rooyen (Université de Mons, TU Delft)

Open Digital Architecture Archives or the Infinite Metaphorical Iteration of Architecture

OPEN DIGITAL ARCHITECTURE ARCHIVES OR
THE INFINITE TYPOLOGICAL ITERATION OF ARCHITECTURE

Digital archives raise the question of how to preserve them, display them or catalogue them. The question we would like to address here concerns the potential of digital archives to be integrated into an ideation process, enabling the creation of new architectural types based on archives of the past.

In a vision of an open society, the data represented by digital archives can from our point of view be more widely opened up to academics and practitioners alike, to increase their potential for use.

In the book *Copy Paste: Bad Ass Copy Guide*, the past is considered as 'a vast archive on which we can and must build'[1]. From our point of view, by opening up all digital archives contained in research centre, we can consider digital archives as an open gigantic typological catalogue unknown to all. Considering this possibility of open-source archives, data contained in research centre have the potential to be considered again and reinterpreted through a process of automation and the use of Artificial Intelligence made possible with the emergence of the second digital turn.

The Second Digital Turn and the Potential of Open-Source Archives

The use of computer-aided design has long been the subject of theorising, by Mario Carpo, Greg Lynn or Peter Eisenman. Mario Carpo has devoted a number of books to the subject, tracing its recent history back to the 1990s, at least as far as architecture is concerned. Following Carpo, the first digital age gave birth to a blob style, also known as the 'style of the spline'[2] and CAD software were used to design a non-standard architecture.

During the second digital turn, data has become central in the automation process of designing architecture. Algorithm and data-driven architecture gave rise to 'the second digital style, the style of data-affluent society and of a nouveau data-rich technology, […] the style of the late 2010s'[3].

1   Winy Maas, Felix Madrazo, *Copy Paste: The Badass Architectural Copy Guide* (Rotterdam: nai010, 2017).
2   Mario Carpo, *The Second Digital Turn. Design Beyond Intelligence*, (Cambridge, MA: The MIT Press, 2017), 4.
3   Mario Carpo, *The Second Digital Turn*, 56–57.

The second digital aspect was also a way to develop the possibility of creating a collaborative virtual network, where 'computer-based design and manufacturing is giving rise to new forms of digital artisanship, narrowing the Albertian divide between conceivers and makers. Likewise, the digitally enhanced horizontal integration of actors and agencies in the design and production process is already challenging the modern notion of the architect's full authorial control and intellectual ownership of the end product. New digital platforms for open-ended, interactive collaboration may beget endless design variations, revisions, or versions loss of design control and of authorial recognition, and even, in the most extreme cases, collective or anonymous results'[4].

Such an open-source data network has been discussed between different architectural archives research centre and can, as such, can be used for digital archives access and be an 'open-ended, interactive' platform that can give the designers access to unknown architectural references that can be exploited into a data-driven design process.

Open-source data address issues of data privacy, intellectual property rights, and the quality control of shared digital architectural archives to ensure responsible and ethical use. It also questions limitations and challenges associated with opening up digital architectural archives. According to Carpo, this question of authorship is rooted in Leon Battista Alberti's drawings[5]: once he signed and annotated his plans, his copyright began to exist. Yet architectural projects have always been open to reinterpretation, since history is a vast field of investigation and precedents. Was this not the case when Rem Koolhaas distorted the plan of the German pavilion at the Barcelona International Exposition (1929) to fit the circular layout of the Triennale? Does Koolhaas reference his approach and then offer us a personal, discursive version in his collages for Casa Palestra in 1986? Whose intellectual property is it, then? For Koolhaas, the reference serves to support a critical and ambiguous interpretation 'whereas Koolhaas consciously and deliberately challenges moral values by celebrating athletic activity and sexual pleasure in an architectural icon of the fascist period'.[6]

Open archives can play the same role as Mies' plan in Koolhaas' work for academics and practitioners and as such will challenge 'the modern notion of the architect's full authorial control and intellectual ownership of the end product' to 'relinquish the legacy of the authoral privileges the design professions have so laboriously struggled to acquire over time'[7].

Anteriority of Architecture

Using history and archives into a design process refers to what Peter Eisenman called the anteriority of architecture.[8] In the 1990s, the reference to this anteriority was not exhaustive in the American architect's work. It was essentially a question of capitalising on all the knowledge acquired by the architect through the analyses he carried out of Renaissance architects' projects (Alberti, Brunelleschi or Palladio) or the spatial analyses illustrated in his PhD-based on the works of Giuseppe Terragni. Open-source archives therefore represent a potential for greater comprehensiveness, and the capacity of computers to process data is far greater than the knowledge acquired through the research work of a single researcher.

In different internationally renown architectural offices, Rhinoceros and Grasshoper are often used to test different variations of way of assembling different typology for example. Algorithm and data-driven architecture enable 'a process of differentiation [that] can now be scripted, programmed, and to some extent designed'[9]. With the emergence of the artificial intelligence, offices such as Zaha Hadid Architects, led by Patrick Schumacher, use Dall-E or Midjourney to reinterpret, combine or merge their own archives, their own anteriority into an ideation process to test variability.[10]

As such, new technologies since the digital turn and more specifically Artificial Intelligence enrich architectural practice with the potential to create new typologies, new variations of types based on anteriority of architecture and digital archives such as MVRDV's, preserved at the NI. In order to conceptualise contemporary public buildings that 'requires developing new types of buildings and building elements'[11], AI tools can re-invent past structures and existing typologies, through research and design as well as research by design capitalising on digital archives as a vast resource of data and types. Online platforms such as DigitalFUTURES provide tutorials to help designers master Dall-E and Midjourney.[12] Of course, such use of digital archives in design process needs a critical methodology to develop innovative buildings. Moreover, by capitalising on certain types of archival documents, the research we present here was primarily aimed at discovering how to integrate image generators into a design process, a tool that some practicing architects have already seized upon. This paper explains the different steps of the exploration we made using different archives and image generator through the course of history and theory of architecture in UMons (Belgium).

4   Mario Carpo, *The Alphabet and the Algorithm* (Cambridge, MA: The MIT Press, 2011], 117–118.
5   Mario Carpo, *The Alphabet and the Algorithm,* 44.
6   Mathieu Berteloot, Véronique Patteeuw, "OMA's Collages. OMA. The First Decade", *OASE* 94 (2015), 67.
7   Mario Carpo, *The Second Digital Turn*, 142–143.

8   Robert Somol, *Peter Eisenman: Diagram Diaries* (London: Thames & Hudson, 1999), 37.
9   Mario Carpo, *The alphabet and the algorithm*, 7.
10   Patrick Schumacher, "AI and the Future of Design Roundtable Discussion, Digital FUTURES world", April 8th, 2023 [https://www.youtube.com/watch?v=jjUb48f4Roc].
11   TU Delft Public Building Group statement, https://www.tudelft.nl/en/architecture-and-the-built-environment/about-the-faculty/departments/architecture/organisation/groups/public-building.
12   See https://digitalfutures.international/.

AI DIGITAL ARCHIVES DATA-DRIVEN GENERATION

Following Mario Carpo, 'thanks to data-driven Artificial Intelligence we can now mass-produce endless non-identical copies of any given set of archetypes or models. The GAN technique can produce similarities working the analytic way by abstracting one ideal archetype out of and common to many similar images- or, by reversing the process, generating many realistic images similar to their models; by applying the two processes sequentially, GAN can produce a new set of non-identical copies collectively similar to one or more original datasets'[13].

As such, the course assessment was at first inspired by GAN technique. The first intention was, based on projects by MVRDV and the late Belgian organic architect Jacques Gillet, to test the typological recognition potential of common image generator tools, with the aim of shaping several variants of reference projects, to challenge the ability of artificial intelligence to create potential alternatives, just as Grasshoper and Rhino. Digital archives and unbuilt typology would as such, serve an unprecedented exploratory universe in the architectural design process.

Our first intuition was that using AI and digital archives in the design process can really become 'a kind of combinatorial theory that allows given elements to be associated with each other in all possible ways, first abstractly, independently of their distinction, and then according to the distributive requirements of the different terms'[14]. The different results of this first exploratory phase did not meet this objective.

AI IMAGE GENERATOR POTENTIALITIES

Unlike Patrick Schumacher and Zaha Hadid's office, we did not use realistic renderings to generate AI image, but architectural drawings and built projects pictures were used as an input to generate image and/or variations.

Firstly, we used pictures of Silodam as a first input and we defined a normal degree of influence for the final output. The different output we were able to generate were collected and put together to constitute a kind of typological catalogue.

Secondly, we digitised a significant percentage of Jacques Gillet's archives preserved at the GAR architecture archives research centre in Liège, to exploit them for our AI exploration. In the archives, we discovered a lot of hand drawings of the Sculpture house, and some really impressive hand drawings made during different travels in Dordogne in France. These expressionist drawings contain a huge spatial potential that we wanted to use as input through AI re-interpretation.

Both explorations did not offer any real alternatives to an architectural project. In fact, the images obtained are of course only two-dimensional, and cannot be used as a three-dimensional object. But what do these images represent? How can we exploit these images and archive plans, which in the final output, according to the prompt, deviate greatly from the original document?

The action of AI image generator is to generate 'many realistic images similar to their models'[15], but in fact, the resulting image operates a semantic shift similar to what Véronique Patteeuw associates with the collage process in the work of the Office for Metropolitan Architecture. For the researcher, 'the action of collage—that of collecting, accumulating, piling up, selecting, cutting up and assembling in sequences heterogeneous elements, figurines and objects, in order to achieve a suggested reality—evokes new narratives, new dialogues and new temporalities. Combining motifs and pictorial fragments disconnected from their original meanings, collage doesn't close off the imaginary, but opens it up. It does not seek to approximate reality, nor does it pretend to sublimate reality; it possesses a certain autonomy. Far from being a finished document, collage is a tool for initiating dialogue. As Finnish architect Juhani Pallasmaa points out, collage offers '*archaeological density and a non-linear narrative through the juxtaposition of fragmented elements, derived from irreconcilable origins*'.[16]

AI image generator does not generate a final document just like collages. Archaeological density in our exploration is made possible by using archives as an input. What is generated is much closer to a metaphor, a primary generator, in the words of Rosario Caballero-Rodriguez.[17] The researcher tells us that metaphor in architecture represents knowledge, as does the anteriority of architecture. It helps the architect to think through a project and translate it into a form. Metaphor plays the role of a primary generator, which can be pinned down into four categories: denotation-exemplification, expression and mediated reference. Through denotation, metaphor describes, represents, and even imitates the world, but the world is reinvented through exemplification and expression. This reinterpretation, this expression-exemplification, is the basis of the experimentation carried out with the students, exploiting the tool embodied by image generators using artificial intelligence. What we were able to discover is that using archives in an ideation process as an input subject to variability due to the image generator tool, becomes, once the output has been obtained, a representational tool and generative of an architectural process, in the same way as collage, metaphor or sketch. It is representational, because it enables the project concept to be expressed, and generative, because in itself it contains the potential for spatial organisation, and the potential for action and transformation of the architectural reference. The final output is not a final document but a reality that is yet to come, a potential version of a vision, 'a project of form'[18].

13 Mario Carpo, *Beyond Digital: Design and Automation at the End of Modernity* (Cambridge, MA: The MIT Press, 2023), 122.
14 Leonardo Benevolo, *Storia dell'architettura moderna* (Rome: Laterza, 1964), Vol. 1, 79.

15 Mario Carpo, *Beyond Digital,* 122.
16 Juhani Pallasmaa, "Hapticity and Time, Notes on Fragile Architecture", *The Architectural Review* (May 2000), 80; Véronique Patteeuw, "Le collage dans l'oeuvre de l'OMA (1978–1989)", in Xavier Van Rooyen, *Open Architecture* (Liège: Gar éditions, 2019), 247.
17 Rosario Caballero-Rodriguez, "From Design Generator to Rhetorical Device", in Gerber Andri, Patterson Brent, *Metaphors in architecture and urbanism (*Bielefeld: transcript Verlag, 2013), 91.
18 Giulio Carlo Argan, *Sur le concept de typologie*, in *Projet et dessin, Art, architecture, urbanisme* (Paris: Editions de la Passion, 1993), 58.

In this way, Artificial Intelligence image generator and open source archives open up the potential of digital archives not only as a research or exhibition object, but as an immense database that can enable infinite typological iteration and it represents a possible use of Open architecture archives for the Future. Nevertheless, to overcome the limitations associated with authorship, to 'relinquish the legacy of the authoral privileges the design professions have so laboriously struggled to acquire over time the architectural profession simply has to accept that the design process of many architects is inevitably initiated from an architectural anteriority that is subject to reinterpretation', like in Winy Maas's publication *Copy Paste: Bad Ass Copy Guide*. In any case, we have the intuition that platforms such as Archdaily already disseminate a gigantic amount of architectural content that can be used and reinterpreted by other project authors and are moreover stored long-term on servers and therefore already accessible to all. Open architecture archives can play the same role in a near shared future.
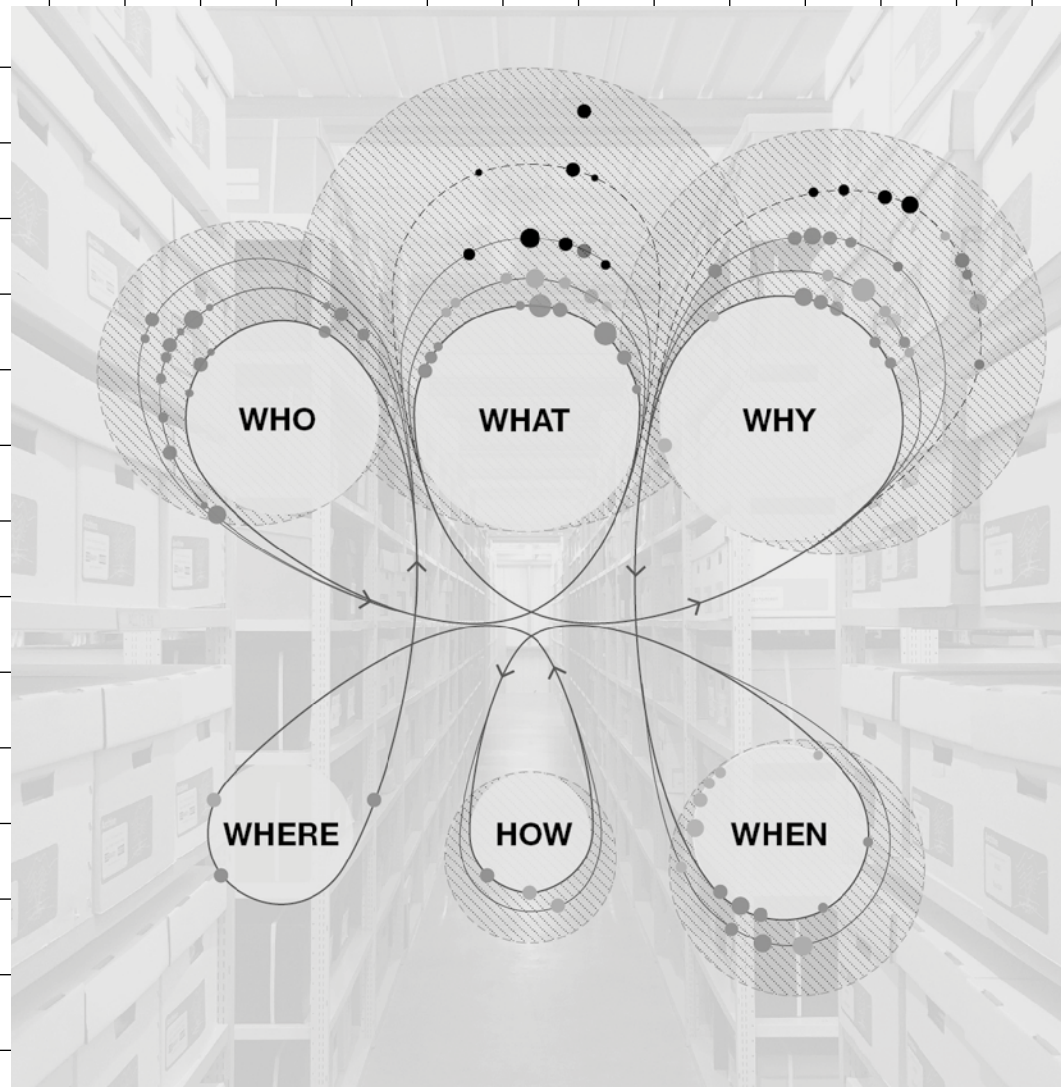
Project Analysis and Repository. Image courtesy of Aymée Thorne Clarke.

Aymée Thorne Clarke (RSHP)

Progress Though Preservation: The Value of an Active Archive in Practice

RSHP (formerly Richard Rogers Partnership / Rogers Stirk Harbour + Partners) are still custodians of their archive, holding almost 50 years' worth of material. The collective nature of the partnership has, perhaps, prevented the creation of a single author foundation and this too is reflected in the archival practices employed. The collection also comprises the archives of the previous incarnations of the practice, overlapping from one to the next, with a continual evolution of ideas by reoccurring and successive creators. The title of this paper refers to the potential for an active archive to support the foundation of theory, and in the realisation of that theory support evolution in architecture, particular to RSHP. As a way of examining this subject, six archival and journalistic fields of preservation, and subsequently interrogation, are utilised to explore the archival process in an architectural practice.[1]

WHO

The discourse surrounding architectural authorship is extensive and varies greatly between period and agenda. However, it is worth analysing in the context of the RSHP archive, as it can, occasionally, curtail its productive use. It is widely acknowledged that collaboration and co-authorship are at the centre of the profession. The different contributions, skills and interests of the Richard Rogers Partnership founding partners were frequently noted for their complementary nature and raise the question of what an author is to architecture or the practice.[2] Is it the person(s) who draws the concept sketch, instructs construction, or defends the design principles the practice follows? Does authorship function, as Foucault asserts, as more than the product of a person?[3] And if so, what purpose does the name of an individual serve? These questions are tied closely to the history of the profession as defined by Alberti, as well as ideas of authority and ownership.

1   International Council on Archives, ISAD(G): General International Standard Archival Description, Second Edition (Ottawa, 2000). The six mandatory fields of archival description and the corresponding field for the purpose of this paper are as follows: 3.1.1 Reference code(s) (What), 3.1.2. Title (Why), 3.1.3 Date(s) (When), 3.1.4 Level of description (Where), 3.1.5 Extent and medium of the unit of description (How) and 3.2.1 Name of creator(s) (Who).
2   Richard Rogers Partnership, Flexible Framework (Berlin: Aedes, 1991), 56. 'It is an overriding aim of the practice to produce work of the very highest quality. Each of the four founder partners has a particular area of specialism and is consequently involved in every project taken on by the practice'. Further to this, it is a stipulation of the RRP/RSHP Constitution that partners are selected for their unique contributions to the practice.
3   Michel Foucault, 'What is an Author?' in *Aesthetics, Method and Epistemology* (The New Press, 1998).

One of the primary means to create legacy is through authorship, evidenced through text and the archive, as architectural history remains characterised by the dominance of individual figures.[4] As a practice operational during the 1980s, RRP was not immune to the portrayal of the 'Starchitect', which has led to distortion of the external understanding of architectural process. Whilst the content of the archive should inform histories by researchers, it can also be susceptible to those very texts and media through inherited misinterpretation.[5] Equally, retrospective archival interventions can call into question the motives of the archivist, after all who is authoring the authors? Far from the neutrality of the traditional archival model, in active practice one becomes a participant in attribution, in terms of authorship and other value-based decisions by which the archive may be interpreted.[6]

Internally, attribution validates the collective process and the contribution of all parties involved, whereby giving individuals agency and value. This can also include external co-authors, such as engineers and contractors, whose specialisms can have a significant impact on design.[7] The challenge of capturing the complexity of architectural authorship, requires more than recording material to reflect the authors and processes by which it was created. Simply recording the collective undermines the individual contributions, and authors who hitherto may have been ignored; whereas recording all individuals both reduces and amplifies everyone to the same status. To mitigate centralised responsibility, openness and accessibility become necessary aspects of archival description, especially with the rise of digital tools that can obscure the hands of many.[8]

WHAT

Identification, however, is only one point of feedback. What constitutes architecture to a practice? The answer to this often aligns with the principles and particular creative process of the architects involved, and therefore dictates the types of material assigned greater value in the archive. There is a symbiotic relationship between the realised and communicated projects (which can range from a building to an unrealised competition entry) and how those projects have been conceived (which is intangible but could include theory, context and interpretation). The latter is often the aspect of architecture that is hardest to capture and is possibly easier if the authors have been prolific writers or speakers.[9] Conversely, the technocratic nature of the current architectural market, set against quantifiable goals, has resulted in archive deposits of standardised sets of information, largely for legal protection, rather than considered material of unique value to the practice.[10]

When RSHP relocated to an office of their own design, The Leadenhall Building, Senior Partner Graham Stirk stated the project was 'a breakthrough where the methodology and the consequential architectural statement were together', a principle that extends as far back as the shed projects of the 1980s and is an approach that still informs projects today.[11] The expression of a holistic approach, in which inventive engineering solutions were combined with systematised industrial components, was key to projects such as Inmos, Patscentre and Fleetguard. However, the methodology by which these projects were created and assembled remained rooted in analogue traditions, created by hand. At Leadenhall, the methodology had largely caught up, and aspirations such as digital fabrication and automated assembly that had reoccurred in practice designs since the 1970s, were realised.[12]

But how can this be read and recorded in archive? The example above demonstrates both immediate and distance knowledge transfer; the latter occurs through those who have been at the practice for extended periods or have a broader knowledge of the practice back catalogue. They also demonstrate a type of knowledge *beyond image*. Although not formally a theory-based practice, there is a culture based on design principles and precedent, with interactions during competitions / early stages often providing fertile ground for such conversations. As the motivation at RSHP is to build, unrealised projects can become incubators for ideas and arguments, the development of which can extend across projects and even decades. All of which suggest that it is essential to capture such discussions, in some form, close to the point of creation. This reaffirms that an active archive requires creative and assertive methods, agile enough to deal with many forms of output (image, text, data, etc.), to make legible the specific approaches or principles that may otherwise remain intangible, as a source of learning in the present and future.

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4   There is a clear correlation between how architectural accolades are awarded to individuals, despite the body of work on which they are based being the product of collective practice. Although not the subject of this paper, misrepresentation as the result of the circular nature of text, media and awards, which can filter out certain persons or influences, remains a media issue more than an archival one.

5   F. Gerald Ham, 'The Archival Edge', *The American Archivist,* Vol. 8, No. 1 (January 1975), 8. 'If we cannot transcend these obstacles, then the archivist will remain at best nothing more than a weathervane moved by the changing winds of historiography'.

6   The traditional model refers to that established by archivist Hilary Jenkinson, who emphasised the neutrality of the archivist. Subsequently this model was adapted by Theodore Shellenberg to accommodate separate definitions for records and archives, ultimately leading to records management and appraisal, processes requiring active participation from the archivist.

7   For example, several industrial buildings designed by the practice during the 1970s and 80s incorporate structure in a dominant role, the difference in structural expression across these projects reflects the character and particular concerns of two engineers: Anthony Hunt and Peter Rice.

8   Mario Carpo, *The Alphabet and the Algorithm* (USA: MIT Press, 2011), 43. 'Interactivity and participation imply, at some point, some form of almost collective decision-making. But the wisdom of many is often anonymous: anonymity goes counter to authorship and, since the inception of the Albertian model, authorship has been a precondition for the architect's work'.

9   Kenneth Megill, *Corporate Memory: Records and Information Management in the Knowledge Age* (Munich: KG Saur, 2005), 11. Megill defines corporate memory as 'active and historical information in an organisation that is worth sharing, managing and preserving for later use'. It is not limited to a tangible record type that is physical or digital, it can be embodied by members of staff, and holds value for record context and collective memory.

10   Terry Cook, 'From Information to Knowledge: An Intellectual Paradigm for Archives', *Archivaria* 19 (Winter 1984–85). This could also be seen as a wider symptom of institutional / administrative archival collecting, largely traced back to the introduction of management structures, high staff turnover, computers and significant volumes of information without the resources to manage it.

11   Graham Stirk, Interview with Peter Murray, Thames Wharf Studios, 30 October 2014.

12   Key projects include Zip-Up House (1969), ARAM (1971), the Autonomous Dwelling series (1969–1991), Industrial Housing Korea (1991), and most recently, the series of modular housing projects with AECOM.

WHY

The retention of architectural records for their legal and evidential value, has been both a blessing and a hindrance at RSHP. In the past, it has led to the storage of a significant quantity of physical records, placing pressure on the archival process of appraisal; and whilst digital material has been retained, it has been difficult to maintain, leading to losses in the collection. Due to the different properties, it has been challenging to prove digital and physical media should be part of the same archive catalogue, that ultimately seeks to record the collective memory of the practice.

The idea of architecture being expressive of a moment in time, has its own lineage in architectural history. Collective memory could be seen as the product of both architectural and archival practice, where the former uses and adds to the latter throughout the process and thus, emphasises the value of the archive in practice. One of the greatest assets of any archive is context, and the complex interrelationships that can be recorded through association, which arguably reflects the part to whole concerns of architecture itself. Yet the archival labour and theory required for contextualisation often goes unrecognised, and failure to assimilate the influence this has, can also limit the understanding and use of an archive. Jacques Derrida's 1995 book, *Archive Fever*, was one of the first texts outside the discipline to acknowledge how 'archivisation' shapes history, memory, and identity, and contributed to archival practice's postmodern paradigm shift.[13] By recognising the dependency of practice and archive, the relationship becomes reciprocal, but only by embedding the archive in practice with active engagement can it be truly beneficial.

For this reason, the RSHP repository, comprising over 11,000 packages, was relocated off-site in 2021, and archival activities were integrated into the main office at The Leadenhall Building. This has enabled tangible engagement that was previously impossible, as well as demonstrating the coexistence of historic and contemporary projects, which can initiate discourse, association, and critical reflection.

WHEN

As a 'second-generation' practice, inheriting the catalogue which includes canonical works such as Lloyds of London and Centre Pompidou, could be seen as burdensome. It is therefore essential to understand those architectural responses in the context of their time, and whether that is or is not appropriate to current conditions.[14] Precedent is used in architecture all the time; to substantiate credentials for business purposes, or as

13 Jacques Derrida, *Archive Fever*, trans. by E. Prenowitz (USA: The University of Chicago Press, 1998).
14 Mario Carpo, *Beyond Digital: Design and Automation at the End of Modernity* (USA: MIT Press, 2023), 117. Carpo discusses the search-based (rather than rule-based) use of precedent, if it has been recorded and can be retrieved, an iteration could happen again based on the occurrence of the same or similar conditions. Although he also acknowledges that the 'same conditions' require further clarification and rarely occur identically.

a testbed for the ongoing refinement of the design ethos in which past ideas are appraised in the light of emerging design challenges.[15] It can be used immediately, from one project to the next, or from a distance. Some have questioned how such distance in function or time could be useful, whilst others view the distance and separation in support of 'the system of discursivity' that establishes the possibility of what *could* be said.[16] Similarly, the reoccurring or reactionary themes in the arts during certain conditions have been a common theme for philosophers and historians, each with their own interpretation; from Hegel to Wolfflin.[17]

Yet, looking back can be perceived negatively due to the associations with imitation, even within a practice reflecting on their own work. It may also be perceived as self-indulgent and insular, effectively excluding any wider context, and leading to the negative perception of archives as monuments to the past. In Mark Wigley's essay, *Unleashing the Archive*, he explains that the expectation to produce experimental work forces architects to move 'beyond the archive', whilst acknowledging how all architectural practices are archive creating and using, a dynamic relationship rather than a conclusive one.[18] This acknowledgement echoes the objectives of the Records Continuum and Engelbart's Dynamic Knowledge Repository.[19] The recent AI summer has shown us how important existing records are, in terms of both language and image. The proliferation of work emerging from Midjourney would not be possible without the vast number of images and descriptions available online. It is essentially a technology based on precedent and feedback loops, albeit one with limited meaning or understanding.[20] Herein lies the difference between imitation and inspiration, and the delicate balancing act of 'past rhetoric and evolution'.

HOW

How materials and tools are used for design and construction is also specific to a time, and arguably elicit particular forms of architecture as a result. The main purpose of these tools is to communicate a design to be constructed or already completed, which can range from unrealised projects to a built structure. Traditionally, the architectural drawing is evidence of authorship and participation in the creation of the built product through its notational

15 Such ideas could include, but are not limited to, structural, technical, contextual and formal.
16 Manfredo Tafuri, 'The Tasks of Criticism', in *Theories and History of Architecture*, trans. G. Verrecchia (Norwich: Granada Publishing), 227–237, and Michel Foucault, 'The Historical *a Priori* and the Archive', in *The Archaeology of Knowledge,* trans. by M. A. Sheridan Smith (New York: Routledge Classics, 2002), 146–7.
17 Henrich Wolfflin, 'The Problem of Recommencement', in *Principles of Art History*, trans. by M. D. Hottinger (New York: Dover Publications, 1950), 234.
18 M. Wigley, 'Unleashing the Archive', *Future Anterior: Journal of Historic Preservation, History, Theory, and Criticism*, Vol. 2, No. 2 (Winter 2005), 11.
19 Sue McKemmish, Michael Piggott, Barbara. Reed, and Frank Upward, eds., *Archives: Recordkeeping in Society* (Wagga Wagga, N.S.W.: Centre for Information Studies, Charles Sturt University, 2005) and Douglas Engelbart and Jeff Ruilifson, 'Bootstrapping Our Collective Intelligence', *ACM Computing Surveys*, Volume 31, Issue 4es (December 1999).
20 Melanie Mitchell, *Artificial Intelligence: a Guide for Thinking Humans* (UK: Penguin Random House, 2019). Mitchell recurrently questions the level of understanding in various AI models of learning, including image identification, gameplay and language recognition.

function.[21] As described in detail by Mario Carpo, the subsequent periods of historic technological change have developed new tools for drawing, designing and construction.[22] But it is not only the historic shifts from machine to digital making that affect the objects of the architectural archive. There are smaller developments dispersed between, that can require their own preservation considerations, such as the use of letratone and diazo prints. The hundreds of dyeline prints that exist for early projects, such as Lloyds and Inmos, are key to understanding the economy of scale, methods of production and coordination of that time.

Equally, there is other media within the collection that has been utilised for specific purposes in the development of a project including graphic, numeric and textual analysis. This highlights the capacity of architecture beyond the image, one in which the requirements of a client / brief are approached using the most appropriate tool to define, refine, and communicate, as economically as possible, the approach.[23] This too is reflected in the development of archival descriptive standards, ultimately to enable interoperability (searching and linking) across many separate catalogues. As proposed, it is the content or emphasis on certain fields that should result in the most appropriate form of representation for each unique project or archive.

WHERE

The representation of the building located in the archive is, often, not identical to the physical manifestation on site. Those who have worked in practice through design development or on-site during construction, will know how many changes can occur and how many parties are involved in the process. Placing preservation emphasis on the built product, obscures the value of the archive material that records both the various iterations of design that were not realised, and the contributions of other 'authors' involved.

To further emphasise the difference, well preserved or maintained archive materials may age in terms of appearance, but their content will remain unchanged, whereas the building can and will change. This does not only happen through occupation and function, but also in the physical additions and reconfigurations users may make throughout a building's existence. Adaptive reuse is becoming an increasingly prominent solution to the damaging consequences of demolition and new-build, and therefore places renewed value on the archive and the variety of material it holds. At RSHP, we have begun to see the second lives of some early projects, and the archive has been an active resource in understanding how to engage, both visually and performatively, with the original fabric makeup.

21   Robin Evans, 'Translations from Drawing to Building', in *Translations from Drawing to Building and Other Essays* (Singapore: Architectural Association Publications, 1997), 152–193.
22   Carpo, *Beyond Digital* and *The Alphabet and the Algorithm*.
23   Edward Robbins, eds., 'Interview with John Young: The Richard Rogers Partnership', *Why Architects Draw* (USA: MIT Press, 1997), 184. Both John Young and Mike Davies have emphasised the importance of the diagrams and graphs, compiled with Marco Goldschmied, to the success of *a Design Strategy for Lloyds, London* competition report, RSHP Archive (1978).

Interventions and additions to existing buildings by other authors have also occurred, such as Billingsgate Market and British Library, and question how or if these separate archives could be reconciled. Almost ten years ago, there was a proposal within the practice to link the RSHP archive with that of another prominent practice, and possibly more beyond that. In the context of adaptive reuse, this wealth of knowledge sharing would be extremely beneficial, as well as providing the potential to support a more cohesive form of civic architecture as the city evolves. Competition has perhaps impeded such a level of openness and accessibility, but within practice, these remain the two most important tools to activate an archive.

CONCLUSION

The fundamental design principles, for RSHP, enable particular responses to changing contexts, materialised by different authors, whilst retaining identity and, a less favourable term, style. They act as a feedback loop, a dialectic, to argue a way forward in continual pursuit of a more refined or representative solution. There is, I think, a correlating archival field for each of the architectural concerns valued by RSHP, highlighting the active relationship between the two.

Detail photo of a timber purlin in a barn in New Jersey, 2023. Image courtesy of Erin Besler.

Erin Besler (Princeton University)
and Sarah Hearne (University of Colorado, Denver)

Beyond Provenance

To imagine any building as an archive is a profound act, with promise to simultaneously futurise the past and curate the future. Working beyond metaphors that describe the aggregate of surfaces and connections, what might it mean to archive a building piece-by-piece? This critical transformation requires the establishment of new cataloguing systems linking materials to information, recording the lives of buildings, and the materials that comprise them. Such a consideration of the distinct histories of building materials presents a significant transformation for their meaning and performance, as well as an epistemological challenge to historians and architects. In contemporary approaches to the recent material turn, where historians are activating geographies of material extraction in order to expand the global historical record of architectural contributions and effects, on the other hand, amid growing calls to arrest the damages of unfettered ecological exploitation, many practitioners are considering the speculative realm of reuse. At the convergence of these positions — though until now it has remained only tangential to architecture — provenance emerges as a site for critical speculation.

As described by historian Achille Mbembe, any archive is both a collection of documentation collated together, imbued with status by an institution, and the building that it resides in.[1] In this definition architecture provides the spatial organisation and aura central to the transference of power happening therein. This pairing between buildings and documents is somewhat intrinsic, yet differently nuanced, to the concept of an architectural archive. Where the 'archive' is most commonly referred to as the paperwork, documents, and drawings sets that were produced in the architect's office during the design and oversight of a building's construction. Considering the architectural archive in this way foregrounds an authorial mode of validation emphasising the procedures carried out in producing a building. As these items enter collecting institutions they are processed according to cataloguing standards and finding aids are developed, facilitating access to the material in a way that reinforces the design process. Recent historiography seeks to intersect these author-based archives with external sources, constructing archives from municipal and federal records offices, consultant's records, private client records, and methods that turn toward oral histories.

At the same time the majority of building records are not found in archives at all, either due to lack of assigned value, storage capacity, or having suffered various forms of damage. As such there is an increasing interest in material research and a reappraisal of the building itself. Documenting

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1   Achille Mbembe, "The power of the archive and its limits," in *Refiguring the Archive,* eds. Carolyn Hamilton, Verne Harris, Michèle Pickover, Graeme Reid, Razia Sale, Jane Taylor (London: Springer, 2002), 19–27.

existing buildings, testing materials, observing marks of wear, manufacturing stamps, and other forms of forensic or critical preservation produce an alternative set of embodied information. These forms of evidence activate construction histories and narratives of site workers, the stories of occupation and use, and alterations to the building over time. This type of information is more difficult to capture, and often historically devalued as it decentralises the architect in favour of a broader definition of architecture.

Rarely however has the research that emerges out of the building coincided with the development of a parallel information structure to match the archive. One key exception is provided by the Historic American Building Survey (HABS) that was initiated in 1933 as a Works Progress Administration project. The program sought to document American 'building arts' with a mixture of written, drawn, and photographed material. This mobilisation was an employment project for out-of-work architects, illustrators, technical drafters, and photographers, during a period of economic depression. But it equally produced a form of information architecture with standard drawing sets and conventions. The subjects of these measured sets were just as often ordinary and everyday architecture, a wider net of valuing that shifted from singular authors to boosterist appeals to the value of 'americanness' and ideas of national heritage. Significantly as the model of sourcing, these documentation sets shifted over the decades toward pedagogy. Many students were involved in the study and documentation of buildings as part of their studies of architectural history.[2] Within these processes we find entangled figures like Esther McCoy: journalist, historian and sometimes practicing architect, who wrote many reports for buildings as part of her preservation activism. HABS takes the built environment as a source to be surveyed and catalogued, but as it collapses data and measurement it detaches information from the building. The paradox of these records is they have been used to support demolition over preservation when seen as sufficient simulations of the building itself.

Reconsidering the relationship of buildings to their information footprint today is especially relevant within the research currently undertaken around the possibility of a circular economy. Within this context building materials carry 'passports' that validate composition, use, dimensions, previous location, and past assemblies. The passport manages the passage and value of a building element according to its placement from one construction to another. It is worth returning to the art historical concept of provenance that traces the origins of an object to the original site of its making and subsequent changing of hands. More recently provenance research has been used within art historical scholarship around the networks and trade of collectors illustrating the structures of the art market. This model then offers a curious counterpoint to early activities that codify material into passports as we establish terms for the circular economy. In the case of building material passports we consider not the authenticity of an item but

2   Vernon Shogren, Historical Research in the Undergraduate Curriculum, Journal of Architectural Education (1947–1974), Vol. 18, No. 2 (Sep., 1963), 27–28.

rather its integrity as it moves from site to site. Expanding the passport information set according to a model of provenance also acknowledges the possibility of other types of information for the work of historians; information that may be embedded in building material itself, but evading notice and cataloguing.

As the idea of a circular economy for building elements grows in popularity, one returns to questions of material value and the poles that potentially open up between arresting a building in a state of importance as a whole, and mobilising and maintaining each individual building part, embodying and distributing a unique set of information. At root in the formation of these poles, preservation at one end and recirculation at the other, are broader questions relating to the status and ethics of concepts like never-ending progress. The circular economy handily bypasses critical reappraisal of the devastation of development, growth, and construction, by mining existing 'resources' above ground already in the built environment as a less controversial site of extraction. Yet the possibility of this closed circle of materiality remains futile simply because institutions with the capacity to take on risk associated with rapidly moving building elements from one site to another are lacking. Testing bodies in the United States, like ASTM, along with the purported reproducibility of mass-produced elements, ensure that one standard-tested beam performs the same as the next. Circularity relies on the development of information structures that mitigate capacities for risk, deploy methods of recording, and expand values associated with documenting in order to archive an entire building. Where might one begin in this task? What do material marks and signs of use tell us? Who or what made them and why? The epistemological model for these questions requires a shift in scale of attention toward different categories of things found on building elements.

CAPTURING EMBODIED INFORMATION

It is fairly easy to spot holes in a building. Looking at an example from a 19th century barn in Hopewell, New Jersey, the first thought might be that the material has degraded due to a leak or an infestation, the most inconspicuous authors. But holes can also tell a different story. The holes in this piece of wood are an origin story, and a source of information. They are two-hundred-year-old hollowings that were used to fasten timber members as they were transported on local canals and waterways. It connects to a forest in a mountainous area in Lënapehòkink, and a route down Lenapewihittuk. Beginning in 1755 thousands of logs were strapped together into rafts, the pine and hemlock logs were disassembled and sold as lumber at markets. The Delaware River would facilitate timber trade for Philadelphia's growing furniture and shipbuilding industries and subsequently supply the building industry in Trenton, New Jersey and the greater Delaware River Valley. This particular raft would end up at one of the many lumber mills in Hopewell, New Jersey that processed the felled timber giving rise to an early building industry and trade location. These holes are marks that both ground the material object and also mobilise it.

If we continue to look at building assembly technologies we find more holes. In addition to the mortise and tenon system, which necessitated moments of material absence for pinned connections to occur, nails are also present. Nails were a valuable commodity. Originally hand hammered, the Revolutionary War led to a shortage of nails in the United States, when England as the main producer and supplier cut the chain. As a result, older buildings were often burned down to salvage nails leaving only the stone foundation as a retroactive site of excavation. In the late 18th century nail production became less costly. The invention of cut nails facilitated the growth of balloon framing over heavy timber construction. That both are present in the same building suggests an object of transition marking the decline of one system of knowledge and the beginning of another. Throughout the various locations this barn appears over the years: including Sanborn fire insurance maps, an incidental aerial photograph taken by the aviator Charles Lindberg in 1932, or even the possible encounter of this building with a project like HABS, the holes and the locations they trace back to are markedly absent from the material record. In a scenario of reuse the holes become a key feature, a point of distinction between one beam and the next, and a focus for a material passport. As such they illustrate the possibility to transform the epistemological basis of architectural materiality.

As we preserve buildings in place we build stories around uniqueness, context, and origination. The question of provenance enters the record at the moment an object becomes mobile. As the field of architecture moves toward a model of circularity, which relies on the mobility of material objects, might we begin to think about a non-authored context? There is a paradox inherent in this question: the more a building performs as an object of historical study, the less it performs as an object of reuse. What critical transformations are necessary to mobilise a building that has been archived?

Actively archiving buildings and their material histories requires new platforms for compiling, recording, and visualising embodied information and lived performance. A collection of web-based interactive applications called *Housemate*, designed and developed by Erin Besler with Daniel Maslan and a team of designers and engineers, is one example of a cataloguing system that builds records around building components and links them to histories of extraction, manufacture, assembly, and application. This system relies on material passports, 'digital twins' where seemingly disparate industries, fields, and timelines are aggregated to produce an inventory of that which is already in use, and engages applied issues of logistics, infrastructure, extraction, and usability, and also a conceptual reconsideration of buildings as depots, lending libraries, sites of distribution and circulation. In doing so it expands the way the built environment is conceived, not only as the physical structures that surround us, but also as the hidden histories of origination connected to them. Building materials are linked to the stories and sites of acquisition, from quarries to storage depots, expanding the network of associated geographies, information, and contributors.

Considering information systems and scaffolding around the nascent circular economy that promise to in-time attest to the integrity of reused building materials, links to the early formation of provenance, rooted in the concept of place that certifies the 'life' of a work of art. Provenance protects value by connecting materials from one place to the next. More recently the field of provenance research has opened up to recognise the ways items have been stolen or acquired through other illicit means. This is a form of activism that often leads to the restitution of works to their rightful places of belonging. Provenance research covers knowledge from traditional connoisseurship, to archival, library, and material conservation. Often this research intersects with large historical events such as wars and material shortages. The art object then, as a commonly saleable and therefore portable item, requires an architecture of information that produces the accountancy around its making, sale, acquisition, and deaccessioning. While like any sort of archive these are imperfect and often obscure.

Left: *MVRDV Cloud*, MVRDV NEXT, 2021.
Right: *Mnemosyne – Panel 39*, Aby Warburg, 1925–1929, at the virtual exhibition 'Aby Warburg: Bilderatlas Mnemosyne – Das Original' at HKW, 2020, screenshot by the author.

Leo Stuckardt (MVRDV)

Data, Memory, Manual: Operationalising the Architectural Archive as a Tool for Design

WHAT TO DO WITH 250K+ IMAGES?

The rapid development of sophisticated, computational design tools accelerates the production of born digital, architectural design artefacts. Generative modelling techniques, accompanying libraries of material specifications, schedules, tectonic assemblies and 3d-assets as well as efficient rendering pipelines exponentially increase the volume of data. As a direct consequence however, the life span of the design data itself — sketches, reference images, (site) photographs, scans and renderings — grows ever shorter. The consequences of this digital turn[1] and the challenges it imposes towards the preservation, interpretation and eventual creative reuse of architectural archives become most apparent when directing one's observation at the architectural archive's most present medium — the operative image. Unlike the glossy images that publicly communicate an architectural project in its finite state, *'these are images that do not represent an object, but rather are part of an operation'*[2]. The immediate relevance of such images can be short lived. As the operation (the architectural design process) develops, they are quickly forgotten, overwritten by slightly modified versions of themselves. Viewed once and discarded as junk data, the sheer amount of archived digital objects is confronted with that very archive's unseaworthiness. How can we explore and relate material in the age of overwhelming digital production? How can we retrieve pivotal objects, buried deep in this sea of information?

Developed on the occasion of the exhibition *MVRDVHNI — The Living Archive of a Studio* at the Nieuwe Instituut between 2021 and 2022, the software *MVRDV Cloud* comprises an interactive tableau that analyses and positions all visual, virtual objects (image files) of MVRDV's first 400 projects on an infinite, multidimensional canvas: a total of more than 250.000 images, sketches, diagrams, screenshots, photographs and tabulations is made accessible to exhibition visitors, designers and users. Images can be dynamically arranged along two axes according to various metadata and filtered by type or spatial concept. Conceived as a self-learning, interactive map of the visual archive, an Artificial Neural Network learns to distinguish the design language of MVRDV as visitors interact with the tool and tag images.

1   Mario Carpo, *The Second Digital Turn: Design Beyond Intelligence,* (Cambridge, MA: The MIT Press, 2017)
2   Harun Farocki, *Phantom Images* in Public, No. 29 (January 2014), 17, https://public.journals.yorku.ca/index.php/public/article/view/30354.

These first 400 projects of MVRDV, created between 1991 to 2017[3], mark not only the formative phase of the now globally operating Dutch architectural practice but also a transition towards digital production of the architectural profession at large. Stored simultaneously on the servers of MVRDV and the Nieuwe Instituut, *MVRDV Cloud* seizes the unique opportunity to engage with design information at the intersection of in-house reuse and institutionalised, open data. By operating on the complete, unfiltered archive it internalises a landscape of design narratives between big-data analytics and synthetic curation. Deliberately hosted in an office space within the NI, rather than a gallery, the exhibition sought out to explore the non-linear, at times coincidental or associative ways in which 'ideas and projects move fluidly back and forth between present, past, and future'.[4] Hence the visual material of the digital archive has to be explored in its entirety, beyond the scope of published material: To dissect the creative processes and identify sequences of key archival objects, the operative image, which constitutes more than 90% of all images within the archive, needs to be prioritised over the representational one.

While not a conscious influence during the development of MVRDV'S *Cloud* project, the imperative of focussing on operative images establishes a connection beyond visual similarity to Aby Warburg's *Mnemosyne Atlas*. Borrowing the name of the Greek goddess of memory, the German Art historian envisioned the never finished project of the atlas as both the conclusion of the work of his life and a manual outlining a novel methodology for doing art history. Rather than singular cultural artefacts, images for Warburg take on the role of 'image vehicles' ('*Bilderfahrzeuge*') in the 'image migration' ('*Bilderwanderung*') of symbolic forms. Ideas, belief systems and world views, migrate through a fluid, non-linear transformation of visual stylistics, image programmes, fashions, fabrics: pictorial knowledge at large. The images assembled in the *Mnemosyne Atlas* turn operative: rather than artefacts only embedded in their specific historic, material and practical context, they take part in the understanding of life — or for that matter, architecture — in movement. In a letter to Karl Vossler, Warburg writes:

'Thanks to the zealous assistance Dr. Bing has accorded me, I have been able to assemble the material for an atlas of images which, by virtue of arranging them in a series, will spread out (i.e., display in space) the function of the ancient expressive values, originally imprinted through the presentation of life in movement, whether internal or external. At the same time, this will be the foundation of a new theory of the memorative function of images for human culture'.[5]

The term function, here, can be understood both as the *workings*,[6] but also as the new-found *operationality*[7] of images in their non-linear arrangement as multi-dimensional, permutational constellations.

THE TABLEAU AS MNEMONIC FORM

While typical manuals tend to follow a rigid, sequential structure, both Warburg's *Mnemosyne Atlas* and MVRDV's *Cloud* remain in constant reconfiguration. The *Bilderatlas'* selection of images, their arrangements as series and even the number of panels remained in constant flux until Warburg's death in 1929. In its final — nonetheless unfinished — stage, it consists of 971 pictorial artefacts arranged on 63 plates covered in black velvet. At least two other arrangements have been photographed between 1924 and 1928. 'If Warburg, through a supplementary photographic *mise en abyme*, had developed the habit of photographing each arrangement of his material before completely changing it in favour of a new transformation, it is because the coherence of his gesture resided in the permutability itself. In other words, it resided in the incessant combinatory displacement of the images from plate to plate, and not in some kind of "final point" (which would be the visual equivalent of a form of absolute knowledge)'.[8]

In MVRDV's *Cloud*, the *mise-en-abyme* is no longer photographic: a parameter driven, digital tool allows users to correlate images through the sorting by various, quantified parameters. The integration of computer vision through deep learning[9] allowed MVRDV's designers to teach the machine an initial set of classifications according to in-house design vocabulary. Envisioned as a self-learning map, images can be tagged, and new labels can be added by visitors of MVRDV's exhibition over the nine months course of the exhibition. In consequence, each interaction with the tool transforms it.

This capacity to learn is essential to the mission of the cloud as manual: It extends the linear logic of a single, objective timeline through a multitude of transversal vectors. These vectors, individual timelines of visitors, researchers, and designers, form an open network of potential readings. Personal memory and the memory of the practice converge towards a new, intuitive objectivity: a non-linear design manual that seamlessly transitions between the holistic gaze of the archive and zoom-ins that reveal clusters of images themselves. The cloud of data points transforms into constellations of pixel clouds. Similarly, 'it thus appears that the *Mnemosyne Atlas* is less the illustration of a pre-existing interpretation of the transmission of images than a visual matrix meant to increase the possible levels of interpretation'.[10] But what exactly could be the productive potential of these possible levels of interpretation?

3   The majority of these images were created in the mid-90s, but a few of these first 400 projects took years to complete. Images of such projects extend the time span of archival material into the 2010's.
4   MVRDVHNI: The Living Archive of a Studio – Announcements – e-Flux. Accessed September 1, 2023. https://www.e-flux.com/announcements/427266/mvrdvhni-the-living-archive-of-a-studio/.
5   Warburg in a letter to Karl Vossler, 12 October 1929, quoted by Schoell-Glass 2001, 187.

6   "Function, as the way in which something works or operates", Cambridge Dictionary. Accessed August 30, 2023. https://dictionary.cambridge.org/dictionary/english/function.
7   "Function, as the natural purpose (of something) or the duty (of a person)", Cambridge Dictionary.
8   Georges Didi-Huberman and Harvey Mendelsohn. Essay in *Surviving Image: Phantoms of Time and Time of Phantoms: Aby Warburg's History of Art*, (Pennsylvania: Pennsylvania State University Press, 2018), 301
9   Image classification through the open-source machine-learning framework TensorFlow
10   Didi Huberman, in *Surviving Image*, 304.

Images on this map of interconnectedness stem from various disciplines and topics that are essential to the fluid processes of (MVRDV's) architectural design. While representational images within the firm's archive nearly exclusively display architecture, operative images, widely located in 'temp', *sketch*, *analysis* or *reference* folders, comprise a much more diverse set of images. As these images in themselves do not need to represent an architectural proposition, they can engage freely with a wider range of aspects around environment, technology, and human society: The image of a circus acrobat, headfirst in free fall, partially covers the photograph of a concrete texture and the rendering of a schematic 3d section with inverted black/white contrasts between adjacent spaces. To its right, a desaturated aerial site photograph.[11] The photograph of Johannes Kepler's model of the solar system next to a mythological depiction of Mars and above a newspaper clipping of the Graf zeppelin.[12] Timelines are collapsed in both examples as they crosshatch mythical and scientific-rational worldviews. It is this very interconnectedness, the space between the archive's objects, that is revealed through the two-dimensional juxtaposition of operative images across projects, time and geographical contexts. As the user combines sorting parameters for each axis of the tableau with image filters, its nearly infinite possible states are folded into a single design instance. Thus, the sorting of things can be productive, but its rules need to be reassessed for every design operation.

(Image) metadata sorts images along the two axes of the tableau.

- Date-of-Creation
- Project Number
- File size
- Dominant Median Hue
- Project Location (Latitude)
- Project Location (Longitude)

Two sets of labels, classified through custom-trained neural networks filter the extents of the Cloud.

Medium
- Sketch
- Document
- Diagram
- Drawing
- Rendering
- Photograph

Spatial technique (MVRDV-specific)
- Pixel
- Stack
- Mountain
- Extrusion
- Object
- Barcode
- Tribune
- Tetris
- Fold
- Village
- Table
- Other
- *Expandable by users

11   MVRDV Cloud, sorted by 'Date Created' and 'Dominant Colour'.
12   Panel C of the final version of Bilderatlas Mnemosyne, Aby Warburg, 1929.

As Winy Maas debates the benefits and drawbacks of various sorting techniques within MVRDV's project archive *KM3*, from chronological to programmatic, the conclusion sounds misleadingly simple: *Spatial Technique*. While the classification of designs into tectonic operations, 'spatial methods that stress the productive aspects of architecture',[13] seem undebatable in the formal articulation of architectural projects as Barcodes,[14] Stacks[15] or Flips[16], the operative images that inform them, will not carry all the characteristics of the spatial method in themselves. Rather they support specific operative aspects that, depending on their combination, can lead to different spatial techniques.

How can we assemble these nonlinear building blocks into a sequential architectural design operation? And what kind of readings or instructions will such a manual offer to the designer?

If Warburg's *Mnemosyne* traces the migration of icons through time and space, the *Copernican Turn* of world models from mythological to scientific, MVRDV's *Cloud* could become an instrument to better understand and influence the processes of architecture after the digital turn.

FROM MEMORY TO MANUAL

The urgency to open up architectural archives and develop means to interpret their internalised design blueprints becomes most apparent in light of the recent rise of creative AI and image generators such as Midjourney or Stable Diffusion[17]. Unlike conventional computational design tools and algorithmic design strategies, which are informed by knowledge, these intelligent machines learn from the raw data itself. As Trevor Paglen notes: *'Instead of simply representing things in the world, the machines and their images were starting to "do" things in the world'.*[18]

In the, admittedly nascent, instances of application of creative AI for architectural production one cannot help to sense a blatant naivety. If these machines are trained on data that is publicly accessible on the internet and thus for the most part is representational in nature, it raises the question: Does a creative AI merely reproduce images that resemble architectural design or is it capable of *doing* architecture?

In order to access these *'productive aspects of architecture'* and engage with process rather than end-result, it is imperative that operational design tools are based on operative, not representational data. The archives, the collective

13   Winy Maas and MVRDV. *Experiments_Piece by Piece* in *KM3: Excursions on Capacities*, (Barcelona: Actar, 2005), 554–61.
14   Winy Maas and MVRDV in *KM3: Excursions on Capacities*, 860.
15   Winy Maas and MVRDV in *KM3: Excursions on Capacities*, 1116.
16   Winy Maas and MVRDV in *KM3: Excursions on Capacities*, 716.
17   Two popular diffusion-based image generators, each trained on vast amounts of image-caption pairs.
18   Trevor Paglen, *Operational Images* in *e-flux Journal #59*, (November 1, 2014). http://e-flux.com/journal/59/61130/operational-images.

memories of architectural practices, are the place where these operative images can be found. However, while representational data is carefully vetted by PR departments before it is published, the vast volume of these archives makes it impossible to do the same for their collections. Potential issues around copyrights, privacy, or competitive advantages might raise corporate concerns to make archives accessible to the public. Recognising the need for collaboration in both innovation and data stewardship, MVRDV donated all data of their first 400 projects to the Nieuwe Instituut in 2015.[19] More than prototyping a technological solution, *MVRDV Cloud* seeks to further the potentials of this interaction between corporate practice and public institution. The author of the images returns to the, now public, archive and begins to decipher their own memory. Developed by MVRDV NEXT, the firm's in-house research and development unit, the source files of the *Cloud* application are also stored on the firm's servers, thus adding to the archive, and forming an ever changing, recursive series of tableaus.

Considering the shaping of these tools a continuous, fluid process and a central task for their end users (architects, designers), the critical combination of data-science[20] and machine-learning techniques[21] can offer an alternative path towards accessible, generative AI design tools. Clearly, a shift from published towards archival images alone could risk falling into the same trap of merely producing representations of operative images. However, while general image diffusion models and large language models compress millions of images or text into a singular model for new creation of images or text, *MVRDV Cloud* prioritises juxtaposition over superimposition. As Aby Warburg was most certainly aware of the impossibility of a final configuration of his *Bilderatlas*, the permutability of the virtual allows for open-ended repositioning and clustering of rapidly growing, archival images. It can expand rather than collapse the world contained in one image.

19   *MVRDVHNI: The Living Archive of a Studio – Announcements – e-Flux.*
20   Image statistics and metadata extraction, Python scripts by MVRDV.
21   Image classification through TensorFlow, code by TensorFlow authors, implementation by MVRDV.

Fitting Abstraction, 14th Venice Architecture Biennale, 2014. Photo by Ana Martina Bakić.

Ana Martina Bakić (Zagreb University)

Curating Croatian Architectural Archives: Curating Croatian Architectural Futures

Since 1980, every two years, the architectural community gathers at the Venice Biennale to absorb and discuss the future of architecture, its immediate prospects, and sometimes its past as well. Presentation techniques vary, but in the last three decades, different contributions can be roughly categorised as those that tend to design and present research, and often rely on existing architectural archives, and those that embody research in what Angela Vettese has termed 'critical pavilions', experimental pavilions that disrupt the spatial and political framework of the Biennale to achieve specific ends.[1]

In the aftermath of Yugoslavia's dissolution, Croatia has begun to participate in the Venice Architecture Biennale with its own national presentations in 1991. I will focus on two specific Croatian presentations in Venice that together dramatise the two ends of the exhibition-archive spectrum above. The highly anticipated floating Croatian pavilion in 2010, which happened to collapse on its way to Venice, follows the logic of the critical, or rebel pavilion, while the 2014 Croatian presentation at the Arsenale titled *Fitting Abstraction* presented archival research on Croatian modernism. In 2010, the floating barge that was to travel from Rijeka to Venice for the opening was a multi-coded and literally layered and transformative architectural object, rich in material and phenomenal effects, and inviting relationality with its changing context. It was designed and produced by a group of Croatian architects. I argue that we ought to read it (its making, floating and collapse) as a form of an architectural performance and experiment made possible in part by its historical moment, described by some theoreticians as a period particularly fit for experimenting.[2] It was also a project that drew on references to collective work and art practices of these architects' own (previous) Yugoslavian experiences, on forms of cultural memory.

On the other hand, the 2014 Croatian pavilion, representing Croatia freshly after its entry into the EU, relied on a very different form of narrating Croatia's modernist heritage. Curated by a theoretician of architecture and architect Karin Šerman, and in response to Rem Koolhaas's request to national pavilions in 2014 to contend with a hundred-year period in their local/national narratives of modernisation, *Fitting Abstraction* proposed that

1   Angela Vettese, *The National Pavilions of the Venice Biennale: Spaces for Cultural Diplomacy* (Venice: *Monos,* 2014).
2   Ivan Rupnik, *a Peripheral Moment: Experiments in Architectural Agency, Croatia 1999–2010* (Barcelona: Actar, 2010).

modernity has always been at the centre of Croatian identity. Its exhibition design invited audiences to consume this narrative as readers of history and its forms of evidence (photographs, drawings, models). Since the biennale explicitly bracketed the period between 1914 and 2014, during which Croatia had participated in two different Yugoslavian formations (Kingdom of Yugoslavia 1918–1941, and Socialist Federal Republic of Yugoslavia 1945–1991), and took part in the Austro-Hungarian Empire, the insistence on Croatian modernity ensured an important form of narrative separation from Yugoslavian architectural heritage. My presentation will consider the key differences in these two ways of instrumentalising 'the archive' to project architectural and political futures out of it.

2010, FLOATING PAVILION, AN EMBODIED ARCHIVE

For Croatia's participation in the 12th International Architecture Exhibition in Venice in 2010 and in response to Kazuo Sejima's theme *People Meet in Architecture*, the Croatian Commissioner of the Ministry of Culture, Leo Modrčin assembled a team of fifteen up-and-coming architects.[3] According to the official presentation of the pavilion, the team began by considering ways in which they could prompt different proposals for a floating pavilion, that would then be exhibited in the space of the Arsenale as documents and models 'awaiting better times for its execution'.[4] Very quickly, however, the architects opted for a single collective design-build project, that would travel to Venice, marking both the fact of Croatia's loss of access to the national pavilion of Yugoslavia in 1991, as well as the historical Italian-Croatian maritime links. The architecture of the Croatian floating pavilion was deliberately multi-coded from the beginning. It was a hybrid boat-architecture, relatively compact and of a non-standard materiality, with a ship stair at the entry, and an excitingly architectural carving of interior space, with a view of the surrounding scenery, but without a standard façade or windows, it was an exterritorial piece of Croatia, floating towards Venice. According to Ivan Rupnik's periodisation of the 'peripheral moment', as that extended period of Croatia's post-socialist, post-Yugoslav transition towards the EU, but before it had become subject to its regulations and financial structures, the floating pavilion was also a perfect expression of the kinds of experimentation that was possible in this underfunded and unregulated moment. Its space and its constantly variable interior and exterior effects were defined through extremely sparse, even minimal means, through a deployment of a dense matrix of steel construction armature. As a floating public space and a viewing platform, the floating pavilion presented a stage symbolically displaced to the sea, invoking Noah's arch that disseminated (an archive) of procedures and heritages from its origin point.[5]

3   The members of the team were Croatian architects: Saša Begović, Marko Dabrović, Igor Franić, Tanja Grozdanić, Petar Mišković, Silvije Novak, Veljko Olujić, Helena Paver-Njirić, Lea Pelivan, Toma Plejić, Goran Rako, Saša Randić, Idis Turato, Pero Vuković and Tonči Žarnić.
4   Leo Modrčin, "Proven wrong," *Brod / The Ship / La Nave,* 2010 (Leo Modrčin's private archive): 11–15.
5   Its formal abstraction fits within Karin Šerman's categories in *Fitting Abstraction*, especially among other experimental projects that have been historically involved in pushing the boundaries, or those that have benefited from generative algorithms.

Imagined from the outset as a participatory project, with a series of interventions (dockings) in public space, the floating pavilion was in dialogue with the local experimental heritage in architecture as well as in the realm of happenings and the 'new art practices' that sought to activate public space and culture with critical dialogue, humour, and art. Though these were the socialist era's shoe-string productions of art, they were institutionally supported to some extent, and more importantly, they are part of the cultural memory of the Yugoslavian period, and thus belong to the generation of architects who designed and built the floating pavilion.[6]

Though with successful individual practices, its architects insisted on the collective dimension of the project, including them (both in design and collective financing of the project) and many boat-builders. This insistence on the collective, which includes the audience for the completion of the project, could be seen as simply anachronistic, but it is much more interesting to think of it as a form of re-enactment, or as a 'retro-utopian' impulse in the generation of architects who were straddling two systems and different formations of the country.[7] On the other hand, the floating pavilion's mobility was meant to support a kind of contemplative transference from an (architectural) object to an event in space and time, an unstable, multidimensional space rocked by the waves, and with constantly transforming views of the context. According to Miško Šuvaković's definition, these effects technically make it into a happening. Even its unexpected and unplanned deformation and collapse on its way to Venice (and thus failure to arrive) easily support Alan Kaprow's insistence on the uncertain outcome and open end of happenings.

Many local and international critics of architecture have written about the possible utopian dimensions of the floating pavilion project.[8] Kindred with the 1960s and 1970s art practices that were self-critically examining their own position within the institutions of art in the socialist state and stepping out directly into the urban sphere, it is possible to read the floating pavilion as an interdisciplinary intervention, which includes and embodies such art practices, communicating them as values for the future. With its journey and end, it directly demonstrated the lack of practices which were simply 'understood' in a previous period (stable and complex cultural landscape oriented towards a diverse collectivity within a stable country and its institutional structures), as well as different temporalities that are intertwined

6   Among the art practices of note it might be important to invoke as a reference a happening titled *HIT Parades* that took place in the gallery of the Student Cultural Centre in Zagreb in 1967, when Mladen Galić, Antom Kuduzom, Ljerko Šibenik and Miroslav Šutej opened an exhibition that took on various attributes of a spontaneous happening, described by art historian Ivo Šimat Banov as an event in which 'the production of an ambiance and then its demolition placed greater emphasis on destruction and temporariness' than any particular content. Ivo Šimat Banov, "Mladen Galić ili biti samim sobom," online publication of Matica hrvatske, 2019, https://www.matica.hr/hr/575/mladen-galic-ili-biti-samim-sobom–29004/.
7   Boris Buden uses this term referring to Inke Arns to describe such backward-forward relationship in culture in general, whereas she used it to write about the Yugoslavian/Slovenian art scene. Boris Buden, *Zona Prelaska, o kraju postkomunizma* (Belgrade: Mala Fabrika Knjiga, 2009).
8   Vedran Mimica, "Utopijska putovanja," *Čovjek i Prostor* 672/673 (2010): 22–23; K. Michael Hays and Marrikka Trotter, "Fielding Fictions: a Conversation," *Log 22: The Absurd* (Spring/Summer 2011): 136–146; Ethel Baraona Pohl, "Croatian Pavilion at the Venice Biennale," *Arch Daily, last modified* August 25, 2010, https://www.archdaily.com/74469/croatian-pavilion-at-the-venice-biennale.

within it. The floating pavilion embodied and released for its makers and visitors some of the temporalities coined by the art curator Zdenka Badovinac for her 1993 exhibition, titled *The Present and the Presence*: *ideological time* in which logics and praxis of self-management from the period of Yugoslavia are deployed in the sphere of art and architecture; *future time* in which modernist utopias are meant to be realised; *time of the missing museum* (pavilion), *lived time* of bodily experiences, *transition time* from socialism to capitalism, *dominant time* of global neoliberalism and the *imaginary time* of future social equality.[9] Though this made it a necessarily complex project, whose experience, at any point in the process, would likely provide only a partial understanding of these temporalities and their value systems, we can think of it precisely as a physical and procedural repository of important collective references without the authority of a state archive, or even an acknowledged collective, or national narrative of architecture. And yet this simultaneous glance at the rear-view mirror and forward was valuable precisely because it dwelled on both directions without sublimating their tensions.

2014, FITTING ABSTRACTION, AN ARCHITECTURAL NARRATIVE OF BELONGING TO EUROPE

As a response to Rem Koolhaas's theme for the National Pavilions at the 14th Venice Architecture Biennale in 2014: *Absorbing Modernity, 1914– 2014*, many national pavilions launched into historical investigations of their own architectural production, modernism as a style, as well as with forces of modernisation that had locally influenced ideas of progress and modern lifestyle. The Croatian curator Karin Šerman and her curatorial team undertook an extended theoretical and historical study about Croatian architecture and its absorption of modernism.[10] Insofar as modernism corresponded with abstraction, they suggested it had always been a major component of the local/national architectural identity. Exhibition research resulted in the installation of the archive, that included works chosen at the intersections of historical and contemporary production, presented through photographs, diagrams and models. The installation followed the conceptual organisation into eight architectural themes, each of them relying on historical and vernacular examples of local architectural traditions.[11] The themes—which were also termed 'fundamental attributes of Croatian architecture'—were: Poetic Reduction: Latent Rhetoric, Sublimating the Regional: Sublimating the International, Engaging the Landscape: Interacting with Nature, Modernising Infills: Reinforcing the City, Generating the Social: Implanting Public Space, Artistic Alignments: Emancipating Modernity, Open Systems: Frozen Algorithms, Enacting Experiment: Expanding the Scope. They were developed following intensely (autonomous) formal architectural operations. In the exhibition, each of the 'fundamentals' began

with the earliest works, some from before 1914, starting with photographs of vernacular examples on the wall and continuing with documentation and dedicated graphics across horizontal surfaces, insisting thus on the continuity of each of the architectural genealogies proposed. The curators proposed that: 'All eight of these decisive thematic lines rely precisely on modernist conceptual and instrumental apparatus, proving modernism as an effective bearer of national architectural identity'.[12]

Archival photographs, diagrams, documents, beautiful (abstract) models explaining architectural operations, and a historical timeline covering the last hundred years were added to historian's scientific apparatus. The timeline graphic included multiple registers of simultaneous historical developments that were said to have followed or existed as a complex background for the architectural developments. Socioeconomic changes, different political formations and ideological changes, key events in art and culture, as well as important publications, were presented as points of historical orientation for the abstract formal techniques rather than as their possible causes or explanations. They legitimated the newly created archive and narrative, but the cultivation of abstraction in Croatian architecture was seen more generally as a pragmatic outcome of scarcity and consistent internal tendencies towards abstraction.

Theoretician of art Claire Bishop has coined 'dialectical contemporaneity', a pair of terms that most generously describes the ways that the *Fitting Abstraction* archive was produced and presented.[13] Bishop claims that critical examination of the past and its encounter with the contemporary, produce an archive as a platform from which to read and visualise the multi-temporal contemporary. This encounter ensures a simultaneous perspective of multiple different temporalities, in which time and values appear as key categories of the examination, which in turn results in alternative views of the past, the contemporary and possible futures. The construction of the archive itself is extremely valuable, especially in its retroactive indexing of traditions that have stayed underexamined despite their historical emancipatory social potential. And yet in some important ways, and despite its obvious reliance on chronology, *Fitting Abstraction* abstracted historical time, disabling the explanatory power of cultural, economic or political alignments between the formal moves it catalogued and their context. This also meant that Croatia's participation in Yugoslavia was simply understood as one of the frameworks imposed upon Croatian architecture and ultimately sublimated in its abstraction.

The floating pavilion embodied references, protocols, temporalities and values of an older period, advocating at the very end of 'the peripheral moment'—before Croatia's entry into the EU—for a future in which collectivity, participation and self-determination might be possible. Its physical collapse

9   Zdenka Badovinac, *Glossary of the Present and Presence* (Ljubljana: Moderna Galerija, 2000).
10   Curatorial team for Fitting *Abstraction*: Zrinka Barišić Marenić, Melita Čavlović, Igor Ekštajn, Nataša Jakšić, Mojca Smode Cvitanović i Marina Smokvina.
11   Karin Šerman and Igor Ekštajn, *Fitting abstraction: 1914–2014, exhibition catalogue* (Zagreb: MSU, 2016): 8–9.

12   The catalogue and the description of the exhibition online list them, https://fittingabstraction.com/.
13   Claire Bishop, *Radical Museology: or, What's 'Contemporary' in Museums of Contemporary Art? (*London: Koenig Books, 2013), 55.

colourfully marked the closing of that era. It may be a stretch to claim it as a physical and experiential archive, but it was certainly a vehicle for a series of different access points to collective and individual cultural memories and a momentary opening towards a future in which some of those might continue to matter. Conversely, *Fitting Abstraction* took place just a year after Croatia officially joined the EU. The marked minimalising of the Yugoslavian narrative (the political and historical conditions that had been the context of half of the timeline under consideration) in the project has to be read as a direct reflection of the most pronounced concern and optimism about its fitting in and belonging to the traditions of European modernism.

Zaha Hadid Architects, *Moonsoon Sketch*, 1989–90 © Zaha Hadid Foundation.

Jane Pavitt and Catherine Howe (Zaha Hadid Foundation)

Zaha Hadid Foundation: Interdisciplinarity and Intersectionality

Interdisciplinarity and intersectionality are central to the ethos of the Zaha Hadid Foundation, the legacy organisation initiated by Hadid in 2013 before her untimely death in 2016. ZHF was launched in early 2022, with a mission to preserve and facilitate public access to her work across architecture, design and art, with a collection spanning around 15,000 works, including paintings, drawings, models, product design, furniture and fashion, as well as works on paper, digital archives and a library. An architect whose distinctive methods derived from painting and whose work as a designer was also extensive, Hadid's commitment to the interdisciplinary nature of the arts was written into the statutes of our organisation and is therefore a key aspect of our work. As the only architectural foundation dedicated to the work of a woman of colour, and given Hadid's status as an Iraqi-British immigrant, we also have a unique opportunity to consider what this meant for her as an architect.[1] Whilst Hadid was an architect of exceptional success and the first woman to win most of the profession's major awards, she nevertheless experienced discrimination and disadvantage at all stages in her career. To use her own words, 'some of the biggest difficulties that I faced were brought about not by my work, but by my existence as a woman, or as an Arab, or indeed, as an 'Arab Woman'. Ignorance and injustices, large or small, blatant or subtle, deliberate or—and perhaps worse—casual, not even recognised by their perpetrators'.[2] Research undertaken for exhibitions, including a major retrospective in 2025, is allowing us to reconsider these contexts. In some cases, reassessing early projects has shed new light on the design methods employed in her studio. In others, reconstructing the circumstances of architectural competitions allows us to understand the disadvantages she faced, not only due to her unconventional approach, but also her status as an Arab woman. In this paper, we want to explore two of these examples.

An exhibition earlier this year, *Zaha's Moonsoon: An Interior in Japan* (2023), curated by our Exhibitions Officer Johan Deurell, provided a deep dive into Hadid's first realised project outside of the UK, the bar and restaurant interior for Moonsoon (1989–90) in Sapporo. Interdisciplinarity was central to the exhibition, for it showed not only how interior design was important for Hadid's

1   For further reading, see Jane Pavitt, "Making the Zaha Hadid Foundation", in Dana Arnold (ed.), *Rereading Women and Architecture: Female agency and the discourses of architectural history* (London: Routledge, 2023), forthcoming.
2   Sophie Lovell, 'Hadid: An Interview with Zaha Hadid by Sophie Lovell', *Uncube Magazine*, No. 37, 2015, 7. https://www.uncubemagazine.com/sixcms/detail.php?id=15927105&articleid=art-1441185293554-a9de40e6-7535-46c2-91f2-0a07eb065c4f#!/page7.

practice from early on, but also how her painterly method was employed collaboratively by her small studio at the time. Our exhibition showed their different design and presentation strategies for the project through concept, realisation and reception. Painting was central to Hadid's approach and carried out by David Gomersall and Kar Hwa Ho alongside her, using acrylic on cartridge paper to visualise the bar and restaurant in contrasting monochrome and red, oscillating between architectural drawing and abstract painting. Hadid struggled to translate her painting method into 3D — finding more conventional model making techniques inadequate for achieving her ideas of abstraction, layering, and transparency. Eventually, this was solved by the use of semi-abstract models made from clear and coloured acrylic. From 1986 to 1995, many of these were made for her by sculptor Daniel Chadwick. His Moonsoon model provided simultaneous multi-level views of the interior design, which was inspired by the opposing themes of fire and ice, represented in abstract shapes. The layering and transparency achieved by such models pre-figured the office's adoption of CAD from the mid-1990s onwards. Some of Chadwick's models were designed to be packed away in clear acrylic briefcases, for portability and a certain degree of showmanship as they were presented to the client. A Moonsoon briefcase model containing the series of project paintings, along with drawings and photocopied collages, allowed us to quite literally unpack the collaborative and interdisciplinary design methods of Hadid's office.

The archive holdings for Moonsoon showed the breadth of approach in the preliminary stages of the project. Whilst the drawings, paintings and models clearly point to the influence of modernist art and design on Hadid's work, the archive also revealed a plethora of photocopied inspiration material which we exhibited in the form of a slideshow (created by the exhibition designer Marwan Kaabour). This included Alexander Calder's *Floating Clouds* (1953), abstract sculptures for an auditorium interior in Venezuela, as well as images of Italian pasta, orange peel and a French Picon liqueur advert. We were also able to trace the abstract curvilinear forms of the interior to Hadid's own Arabic writing. Her early sketches for the project featured Arabic letter forms spelling out 'Zaha' [اهز] and 'monsoon'[نوسنوم].[3] In numerous interviews she reflected upon the significance of Arabic calligraphy in her work, referencing the influence it had upon avant-garde painters.[4] She connected it to mathematics and geometry too, which she found particularly evident in Kufic script.[5] Indeed, Kenneth Frampton referred to Hadid as a 'Kufic suprematist',[6] acknowledging the influence of Kazimir Malevich upon her work, which he described as a 'cursive script' of '*transrational* elements' that continued in the same vein as twentieth-century modernist abstraction.[7] While earlier white male avant-gardes might be accused of

cultural appropriation for their calligraphic borrowings, Hadid's use of it in projects such as Moonsoon speaks of a more complex cultural hybridity particular to her experiences and education. As a young woman, she grew up in Baghdad, during the redesigning and rebuilding of the city by modernist architects from Iraq and the west. After a degree in mathematics at the American University of Beirut, she studied Russian constructivism and suprematism by way of Rem Koolhaas and Elia Zenghelis at the Architectural Association in London. When calligraphy appears in her early sketches for Moonsoon, a private commission for a bar and restaurant in Japan serving Italian cuisine, then, it might be assumed the project is testament to certain sort of postmodern hybridity. However, on closer inspection, we can see how this was part of her own reinvention of the language of modernism, in ways that melded both Arab and western references.

Our second case study, which shifts the emphasis further towards intersectionality, is her unrealised project for the Cardiff Bay Opera House (1994–6).[8] Her competition design comprised a public courtyard and glass perimeter wall with performance spaces set into it 'like jewels in a necklace',[9] allowing for the enjoyment of views into and out of the building across Cardiff Bay and a sense of openness.[10] The Opera House was intended as a symbol of national identity and urban renewal in Cardiff's regenerated bay area, and was therefore a subject of scrutiny for vested political and civic interests. Hadid's winning project was bound to attract a lot of attention. This international competition was an early instance in the UK where race, class and gender significantly entered into the consideration of her work on a very public stage, and a project that Hadid singled out as one where she was met with 'resistance and prejudice' in her career.[11] Despite being awarded the project, the competition organisers responded to reservations about Hadid's proposal by opening up the competition further on two occasions. The ethics of this was widely questioned in the architectural press and referred to by Hadid as 'farcical'.[12] Forced to compete again, she won a second time and then a third. By this point, the competition had become a *cause célèbre*. In the end, collapsing under the weight of political pressure and negative opinion, the project lost its bid for funding from the Millenium Commission at the end of 1995.

Much insidious press attention was given to Hadid's identity as an Iraqi and a woman; for example, the Welsh national daily *The Western Mail* described her as 'Baghdad-born and London-based Ms Hadid, 43 and unmarried'.[13]

3   Many thanks go to Marwan Kaabour for his translation.
4   See Zaha Hadid and Hans Ulrich Obrist, *Zaha Hadid and Hans Ulrich Obrist — The Conversation Series*, 8 (Cologne: Konig, 2007), 119 and "Interview: Alvin Boyarsky Talks with Zaha Hadid", in *Zaha Hadid*, ed. Germano Celant, Joseph Giovannini et al. (New York: Guggenheim Museum Publications, 2006), 45.
5   Hadid and Obrist, *Zaha Hadid and Hans Ulrich Obrist*, 117.
6   Kenneth Frampton, "A Kufic Suprematist: The World Culture of Zaha Hadid. Planetary Architecture II", *AA Files*, No. 6 (May 1984), 101, http://www.jstor.org/stable/29543406.
7   Frampton, "A Kufic Suprematist", 101.

8   This builds upon coverage of the Cardiff Bay project in Jane Pavitt, "Making the Zaha Hadid Foundation", forthcoming.
9   Nicholas Crickhowell, *Opera House Lottery: Zaha Hadid and the Cardiff Bay Project* (Cardiff: University of Wales Press, 1997), 103.
10 See also the description in Crickhowell, *Opera House Lottery*, 102–103.
11 Paul Rowland, "Award-winning businesswoman Zaha Hadid hits out at 'prejudice' over doomed Cardiff Bay Opera House project", *Wales Online*, 23 April, 2013, https://www.walesonline.co.uk/news/wales-news/zaha-hadid-hits-out-prejudice-2996109.
12 Hadid quoted in Patrick Hannay, "Cardiff plot thickens as Nicoletti muddies the waters", *The Architects' Journal*, 1 December, 1994, ProQuest. See also "Cardiff Trustees bulk at Zaha Hadid's winning design", *Progressive Architecture*, Vol. 76, issue 2 (February 1995), 32, Gale Academic OneFile.
13 Nick Horton, "Avant-garde Zaha 'the best choice'", *The Western Mail*, 16 September, 1994, featured as

There are also many gendered opera puns: Hadid is characterised as 'The leading lady of Cardiff Opera House',[14] with titles such as 'Diva Zaha steals the show in Cardiff Bay'.[15] These fitted into the negative characterisation of Hadid as outspoken, difficult and out of touch, which became viciously personal at times. An article by Joanna Pitman from *The Times Magazine* reads 'Zaha Hadid is an angry woman — angry that her brilliant visions are unappreciated by a dull, conformist world', describing her as 'Britain's most hated architect' and 'the architect as diva'.[16] It portrays Hadid as exotic and dehumanised, commenting that 'she does not look like an architect', with her voice 'a deep, dark boom that oozes and bubbles noisily from the top of the stairs', and describing how 'The creature waiting at the top stands in titanic splendour, her hair long and burnt orange, her huge eyes bright'.[17] The othering of Hadid continues in relation to the Opera House project: 'At the mention of Cardiff, she grabs and drains her glass as if it contains not orange juice but the lifeblood of her Welsh opponents'.[18] She allegedly shouted 'It was really VERY difficult. No. It was ABSOLUTELY SHOCKING. The degree of antagonism — and not just with Cardiff — has been very personal and certainly not necessary'.[19] The article prompted a response by Hadid herself, which describes Pitman's intentions towards her as 'vindictive', and asking her to correct inaccuracies about her background and shouting during the interview.[20] Despite this, the cruel and prejudiced characterisation of Hadid in the British media that became pronounced during the Cardiff project was repeated throughout her career as her celebrity grew in the UK.[21]

Relating to her characterisation as a diva, elitism was also associated with Hadid's Opera House and demands further unpacking. While this was evident in the press on a personal level in relation to her family background and education,[22] as Nicholas Crickhowell, the former chairman of the Cardiff Bay Opera House Trust, has pointed out in his book on the competition, accusations of elitism were fuelled by unclear public messaging about the building's use as a performing arts centre.[23] The idea of an opera house for 'Welsh toffs' and 'populist clamour' became evident in tabloid press coverage,[24] exacerbated when it was pitted against designs for

a new rugby stadium. While highly supportive of Hadid's work, Crickhowell mentions numerous issues 'in persuading Zaha Hadid of the need to produce attractive presentations of her design that ordinary people could understand',[25] the evolution of which can be seen through its presentation strategies. Her first competition model is described as 'unsympathetic' and created in a rush while she was busy with international teaching,[26] turning out to be 'a rather brutal interpretation of her concept'.[27] Another more conventional model including trees and people was produced towards the end of 1995, just in time for the Millenium Commission's decision meeting.[28]

One must also bear in mind that the strength of Hadid's office was in painting at this time, its interdisciplinary presentation methods at odds with more representational competition models and drawings. Many of the Cardiff Bay paintings feature Hadid's typical use of multiple perspectives and exploded views, her building reduced to abstract forms rendered in grey, white and black, recalling the style and colour palette of the Russian avant-garde. A particularly damning article by Colin Amery, a member of Prince Charles' traditional and conservative architectural advisory board,[29] described Hadid as 'an archetypal member of that small group of international architects who perform, largely for each other, as a kind of travelling circus. The values they represent have little to do with local context or practicality', continuing 'Her design for the Opera House in Cardiff might have been impressive as a student copy of a Constructivist painting, but as a building it has no reality'.[30] It proved difficult for members of the public and even the architectural community to fully comprehend, with one Cardiff businessman calling it a 'deconstructed pigsty'.[31] This suggests why later paintings, much like the final model, are more accessible; for example, one of the auditorium uses lighter and brighter colours and a clear figurative rendering including the audience, orchestra and performers in situ, viewed through a single perspective. Elitism, then, was also connected to the style, education and culture embodied by Hadid's work, and the sensationalism around this caused her versatile and open design for a multi-use public space that was sensitive to the context of Cardiff Bay to be frequently overshadowed.

Reflecting upon Hadid's Cardiff Bay Opera House alongside Moonsoon, one can consider the interdisciplinary and intersectionality of her work, and how it gave opportunity for both success and failure within two very different contexts. One was a design for a private client during a period of prosperity and creative freedom for architects working in Japan, a centre

image 4 in Paul Rowland, "Zaha Hadid's doomed plans for a Cardiff Bay Opera House", *Wales Online*, 23 April, 2013, https://www.walesonline.co.uk/incoming/gallery/zaha-hadids-doomed-plans-cardiff-2996506. We are incredibly grateful for the excellent work of our two Research Assistants, Jihane Dyer and Cyana Madsen into the press coverage of Cardiff Bay Opera House.

14   Susannah Herbert, "The leading lady of Cardiff Opera House"; "Architecture prize goes to Iraqi woman", *The Daily Telegraph*, 16 September 1994, 10, International Newsstream, ProQuest.
15   Pamela Buxton, "Diva Zaha steals the show in Cardiff Bay", *Building Design*, 19 September, 1994, 1, ProQuest.
16   Joanna Pitman, "arch fury", *The Times Magazine*, 25 November 1995, 25, The Times Digital Archive.
17   Pitman, "arch fury", 25.
18   Pitman, "arch fury", 25.
19   Pitman, "arch fury", 27.
20   Zaha M. Hadid, "Letters, arch fury", *The Times Magazine*, 23 December, 1995, 4, The Times Digital Archive.
21   This is also discussed in Pavitt, "Making the Zaha Hadid Foundation", forthcoming. See also Simon Hattenstone, 'Saturday interview: Zaha Hadid: I'm happy to be on the outside', *The Guardian*, 9 Oct, 2010, https://www.theguardian.com/artanddesign/2010/oct/09/zaha-hadid and Lynn Barber, 'Interview: Zaha Hadid', *The Observer*, 9 March, 2008, https://www.theguardian.com/lifeandstyle/2008/mar/09/women.architecture.
22   For example, there is mention of her family arriving at her diploma show at the AA in multiple Rolls Royces (which she refuted in the aforementioned letter); see Giles Coren, "Small notes of triumph", *The Times*, 26 September, 1994, 17, The Times Digital Archive, Pitman, "arch fury", 27 and Hadid, "Letters, arch fury", 4.
23   Crickhowell, *Opera House Lottery*, 83.
24   Crickhowell, *Opera House Lottery*, 140 and 151.

25   Crickhowell, *Opera House Lottery*, 147.
26   Crickhowell, *Opera House Lottery*, 32
27   Crickhowell, *Opera House Lottery*, 31.
28   Crickhowell, *Opera House Lottery*, 147.
29   See Pauline McLean, "Adviser to Charles flays 'Bay necklace'", illustrated in Paul Rowland, "Zaha Hadid's doomed plans for a Cardiff Bay Opera House'", *Wales Online*, 23 April, 2013, https://www.walesonline.co.uk/incoming/gallery/zaha-hadids-doomed-plans-cardiff-2996506.
30   Colin Amery, "The Tyranny of the Few", *Financial Times*, 26 September, 1994, 17, Financial Times Historical Archive.
31   David Gow and Owen Bowcott, "Architect hits high note with Welsh opera", *The Guardian*, 11 February, 1995, 8, ProQuest.

of increased internationalism, and the other a large-scale regional public venture in the UK that was ultimately perceived to be a cultural and financial risk. On the rejection of her Cardiff project, Hadid said 'Do they want nothing but mediocrity';[32] it could be argued that the intersectionality and interdisciplinarity of Hadid's work is what made it so extraordinary.

32   Quoted in Maev Kennedy, "Fury as Welsh opera plan killed", *The Guardian*, 23 December, 1995, 1, ProQuest.

Danish National Art Library Architectural Archives Vault, 2018.

Sergio M. Figueiredo (TU Eindhoven, Curatorial Research Collective)

Archives without Walls: A Reflection on Post-Custodial Architecture Archives

As the sounds of gunfire and distant explosions flared once again in Sudan's capital city of Khartoum in April 2023, the Canadian Centre for Architecture's (CCA) decision, just a few years earlier, to collect the work of influential Sudanese mid-century modern architect Abdel-Moneim Mustafa appeared to be validated. No matter the violence nor the destruction that would be imposed on the city and its architecture, at least (some of) Mustafa's pioneering ideas and exceptional teachings would be spared from the conflict's horrendous toll. This operation, however, was not a conventional acquisition of an archival fonds for the Canadian centre. Instead of swooping in and acquiring a multitude of drawings and other assorted architectural representations to be held within the controlled environment of its archives' vaults in Montreal, the Mustafa acquisition was intended as a pilot project for the deployment of a post-custodial model to architectural archives. Therefore, the custodians of the Mustafa archive in Khartoum retained ownership of the archives while the CCA provided the expertise (and the financial support) for the archives' digitisation and dissemination for future research resulting in 242 files hosted on Wikimedia Commons.[1] The CCA envisioned this post-custodial approach as a way to develop 'a model for a more collaborative approach to transnational archival work', specifically as 'means to support the collection and preservation of, as well as access to, architecture archives in Africa'.[2]

While the CCA was perhaps most vocal in associating a post-custodial framework to this project, the practice of dissociating ownership of archives from their management and dissemination has been experimented with — in varying degrees — by several architecture institutions. Effectively, as many architectural archives have recently developed initiatives focused on digital preservation and access to archival material without physical ownership or centralised custodianship, a post-custodial practice seems to precede its theorisation (and reflection) in the field.

When Wisconsin's State Archivist F. Gerald Ham first introduced the term 'post-custodial' to archival discourse in a landmark address to the 1980 annual meeting of the Society of American Archivists, he identified a set of

1   The digital files produced by this project include not only digitised copies of original archival material (such as floorplans, elevations, sections and perspectives), but also new photography and video of Mustafa's most significant works in Khartoum. Wikimedia Commons, "Buildings by Abdel-Moneim Mustafa," 2022, accessed September 25, 2023, https://commons.wikimedia.org/wiki/Category:Buildings_by_Abdel-Moneim_Mustafa.
2   Canadian Centre for Architecture, "Find and Tell Elsewhere," May 2022, https://www.cca.qc.ca/en/find-and-tell-elsewhere; Canadian Centre for Architecture, "CCA Find and Tell Elsewhere: Abdel Moneim Mustafa," e-flux Architecture, May 2022, accessed September 25, 2023, https://www.e-flux.com/announcements/443946/cca-find-and-tell-elsewhere-abdel-moneim-mustafa/.

strategies that amounted to nothing short of a paradigm shift in how archival materials were to be managed, preserved, and made accessible.[3] Most notably, he presented a vision for a more decentralised, collaborative, and community-oriented approach to archival work in which archives' custodial responsibility was to be balanced with a greater commitment to facilitating access and engagement. Ham's notion of post-custodial archives was both incited and supported by society's increasingly electronic environment. He specifically identified the transformative power of digital technologies in enabling institutions to provide broader access to archival collections, reaching a wider audience and ensuring that archives remain present, relevant, and dynamic.

Decades earlier, in 1949, André Malraux had been similarly prompted by technological advances—albeit photographic rather than digital—to imagine a radical shift in how museums would collect, present, and cultivate public engagement with art. In the seminal publication *The Museum without Walls*, the eminent French intellectual, advocated for the widespread democratisation and accessibility to art by employing various means of photographic reproduction to capture and disseminate the aesthetic and intellectual essence of artworks, and thus overcome their physical limitations.[4] Through the systematic use of photography on artworks, the imaginary museum, as Malraux termed it, would foster dialogues among different artistic traditions, times, geographies, and media, thus cultivating a much richer understanding of art and its enduring significance, enriching our appreciation of its diverse expressions. Ultimately, Malraux imagined that only once museums freed artworks from their physical constraints could art remain ever present, relevant, and dynamic, similar to what Ham would speculate 30 years later for archival material.

Considering the alignment and interplay between Ham's post-custodial model and Malraux's imaginary museum provides a valuable framework for examining current practices in architecture archives and museums, offering new insights into different approaches to accessibility, engagement, and the preservation of architectural heritage. Effectively, it prompts us to critically examine the role of institutions, the democratisation of knowledge, the impact of technology, as well as the shifting paradigms of participation (and even authenticity) in the architecture archives of the future. Ultimately, it challenges us to reflect on the potential of archives to transcend physical boundaries and foster a more inclusive, transformative, and intellectually engaging relationship with architecture.

A central tenet for both Malraux and Ham was that rather than sole custodianship (either by a museum or an archive), the emphasis should now be on shared stewardship, cooperation, and facilitating broader access to archival materials and artworks. That is precisely what the CCA was attempting to achieve with the Mustafa project, the initial *Find and*

3   F. Gerald Ham, "Archival Strategies for the Post-Custodial Era," *The American Archivist* 44, No. 3 (1981): 207–16.
4   André Malraux, *Museum without Walls*, 1st edition (Garden City: Doubleday, 1967).

Tell Elsewhere project, in which the notion of post-custodial approaches was dutifully mentioned.[5] Similar projects in other architectural institutions, however, were not accompanied by the same awareness or reflection (at least, not publicly), as most seemed to be the inevitable result of the portability of newly digitised and digital-born material rather than any (declared) ambition to develop shared stewardship of materials or the broader dissemination of knowledge and ideas.

While ultimately—and practically—it may not be of great significance, it is worth noting that the separation of custodianship and dissemination within the realm of architecture appears to have primarily arisen as an outcome of the ongoing digital transformation in archival practices. Interestingly, these developments seem to have evolved somewhat accidentally as byproducts of the practicalities of digitisation and the ambition of enhanced accessibility, outpacing any comprehensive contemplation of their wider implications and repercussions.

A curious example of this condition is found in Denmark, resulting from the intended relationship between the Danish Architecture Centre (DAC) and the Danish National Art Library. While the DAC does not have its own collection and is focused on organising exhibitions, the Danish National Art Library, which holds all archives pertaining to Danish architecture, is focused on tending to those archives, which become the thread connecting the two institutions. To facilitate this connection—and since the two institutions do not share the same physical premises—several of the library's architecture archival holdings were digitised.[6] At the time of this writing (in September 2023), a whopping 56.987 photographs and slides (primarily pertaining to Danish architecture), 85.429 drawings as well approximately 160 physical models had been digitised and made available not only to the DAC staff but also to the general public, through the library's digital collections portal.[7] While ostensibly establishing a digitally-enabled continuity between the DAC's exhibitions and the library's collection, the practical result has been a remarkably increased access to a rather broad selection of archival material pertaining to Danish architectural history. Although this impressive project was never publicly discussed within a post-custodial framework, its practical results still clearly resonate with the ambitions set out by Malraux and Ham, particularly regarding the democratisation of access facilitated by digital reproduction. It is perhaps ironic that the DAC does not seem to make much use of the collection in their exhibitions and activities.

However, the separation between ownership of archival material from their management and dissemination also takes different forms. In Mexico City,

5   Canadian Centre for Architecture, "CCA Find and Tell Elsewhere."
6   While the National Library's main building is within walking from the DAC's own building in Copenhagen's harbour, the architectural archives are housed in an off-site facility in the outer suburbs of Copenhagen.
7   The digitised renditions of the physical models are especially interesting since, to faithfully capture the models' three-dimensional aspects, the Danish National Library meticulously recorded them using 24 photographs, enabling visitors to digitally explore the models in a complete 360-degree rotation. Royal Danish Library, "The Architecture Collection," kb.dk, 2023, accessed September 25, 2023, https://www.kb.dk/en/find-materials/collections/architecture-collection.

the architectural centre LIGA *Espacio para Arquitectura* has since 2020 established a new archival section with the declared aim of providing greater visibility and public access to valuable Latin American historical archives that have remained, for one reason or another, not readily accessible. Thus, the platform LIGA ARCHIVOS assembles, manages, and provides access to digital versions of these valuable, yet obscure, archives with the intent to promote and activate the historical archive. Without ever being mentioned as such, LIGA ARCHIVOS has adopted a true post-custodial model, much like the CCA's *Find and Tell Elsewhere*, in which the 'physical files always remain in the hands of the family or the respective foundation' so that 'they themselves always have control and care of their assets" while 'LIGA is [never] responsible for any original files'.[8] Currently, the collection is composed of eight archives of three types: historical archives (mostly of architecture photographers active in Mexico), commissioned photography (of a couple of particularly remarkable buildings in Mexico) and reflective thematic collections (of curated selections of an, although bigger still quite obscure, online archive of 20th-century architecture magazines).[9]

The composition and organisation of this archival project make particularly visible a fundamental shift that accompanies the emergence of post-custodial practices in architectural archives (which had already been identified by both Malraux and Ham). Archivists purposefully wield a newfound (or, in fact, newly recognised) agency within this environment. In this particular case — much like with the CCA's Mustafa project — that is made evident by the ambition to make 'existing archives visible [by] inserting them into contemporary debate'.[10]

This is done not only by making more available, digital facsimiles of historical archives, but also by intentionally considering the implications to contemporary practice and discourse of the ideas and approaches, forms and expressions, embedded in those historical archives.[11] There is much to say about the tyranny of the present, but I will leave that for another time.[12] Instead, I would like to draw our attention to how this increasingly

fluid state has empowered architectural archives to move from a mode of affirmation towards a mode of interrogation, to use Malraux's terms considering the contrast between the physical and the imaginary museum.[13] Arguably, this shift has become more evident as archival institutions not only increasingly take their agency for granted but are also no longer so timid about directing it at particularly (worthy) directions and, increasingly, work. Therefore, this mode of interrogation has been characterised by selections and interpretations, that is, new ways of reading and making sense of the archival material in their care.

But even as new approaches to the archive produce new readings, questions still linger. Although pioneering and worthy of praise, post-custodial projects within architectural archives still commonly fall short of establishing the much-needed connections that would allow them to fulfil the potential of Malraux's imaginary museum. In fact, for Malraux, the reproduction of artworks was only as valuable as the recontextualisation and the dialogues made possible by it. Reproduction was only ever intended to be a means rather than a goal. Malraux's ambition for a fuller understanding of art across time and space, as well as its democratisation, was dependent on both reproduction *and* recontextualisation. And if we can recognise in current projects a torrent of reproduction, the possibilities (and the infrastructure) for recontextualisation are still visibly lacking. Several of these projects are quite siloed and discrete, remaining mostly concealed.

Initiatives such as the new search portal under development for the National Collection for Dutch Architecture and Urban Planning managed by the *Nieuwe Instituut* (*NI*), dubbed as the Other Interface, present one promising way to respond to this issue 'simply' by being built around linked open data that connects various online sources as well as being also organised through histories that provide multiple readings to the collection.[14] It is, however, too early to tell if this new search portal will effectively create new ways of understanding the collection and construct any meaningful connections beyond it, or if it is bound to collapse under information overload. Regardless of its success or failure, the Other Interface must be recognised for what it is: an attempt to forge a new way forward.

Other crucial issues do not have such a clear path ahead of them. One critical issue that is commonly poorly addressed by institutions adopting post-custodial models is what happens to the original artefacts once they have been digitised or reproduced. Beyond general claims that the material is returned to its original custodians, very little is known about the arrangements for safekeeping the material and continued support for these smaller institutions. This should serve in no way to question the ability (or right) of original archive custodians to safe keep material that they have been handling (sometimes for generations), but instead to question

8   In many cases, these are family archives or archives of small foundations with limited resources and contacts to disseminate their material. LIGA Espacio para Arquitectura, "LIGA-ARCHIVOS Info," LIGA-ARCHIVOS, September 2023, accessed September 25, 2023, https://www.liga-archivos.org/info.

9   Specifically, LIGA ARCHIVOS is currently composed of the historical archives of the architectural photographers Roberto y Fernando Luna, Juan Sordo Madaleno, Bob Schalkwijk, Armando Salas Portugal, as well as the commissioned photography of the Tamayo Museum (*REGISTRO: Museo Tamayo*) and the Heroico Colegio Militar (*Arquitectura para Dioses*), as well as (Archivo Activo – Raíces digital UNAM, a set of reflective thematic collections developed from *Raíces Digital* (Digital Roots), the online publicly accessible collection of 20th-century architecture magazines assembled by the Faculty of Architecture at *UNAM*, the National Autonomous University of Mexico. See LIGA Espacio para Arquitectura.

10 LIGA Espacio para Arquitectura, "Archivo Activo – Raíces Digital UNAM," LIGA-ARCHIVOS, June 2021, accessed September 25, 2023, https://www.liga-archivos.org/raicesdigitalunam.

11 There is also a clear parallel between the LIGA's activation of the UNAM's *Raíces Digital* archive and the CCA's archival project *Find and Tell* program, since not only both instances promote "new readings that highlight the intellectual relevance of particular aspects of [the] collection today," but they do so by inviting experts to create particular arguments about the material in the archives by making significant selections and interpretations of that material. See Canadian Centre for Architecture, "Find and Tell," CCA, 2023, https://www.cca.qc.ca/en/find-and-tell.

12 For a discussion of how presentism manifests itself in a digitally connected society, see Douglas Rushkoff, *Present Shock: When Everything Happens Now* (Penguin Books, 2013).

13 Malraux, *Museum without Walls*, 162.

14 Nieuwe Instituut, "The Other Interface," November 2022, accessed September 25, 2023, https://theotherinterface.hetnieuweinstituut.nl/.

the ethical responsibilities of institutions towards those archives and the potential unintended consequences of post-custodial models to devalue original artefacts and drawings.

It is fundamental to question how the inequalities of power are acknowledged and negotiated in a post-custodial reality for architecture archives so as to ensure that these promising models do not end up replicating or enabling extractive and exploitive structures and, with them, further reduce the agency of the smaller archives to the benefit of the larger institutions.[15] The answer to this, as in so many things in architecture, may lie in the details, since it is 'through daily archival practice that the ethical choices which determine our relationship to global ideologies are made'.[16] Under these terms, the agreements between institutions and custodians of archives (and their implementation) become crucial components to resist the risk of transnational exploitation and of post-custodial models to become themselves neo-colonial by extracting cultural capital (in the form of knowledge and ideas) from the original archive in a way that only benefit the status of the disseminating institution. In short, once the archives are introduced to broader networks of dissemination, how does it benefit original archive owners and their communities?

This is a crucial question for which I also do not have a clear answer. But as post-custodial models are becoming increasingly prevalent within architectural archives and more museums without walls are created, these are the types of questions that should be posed so that the reality of post-custodial archives can live up to its promises.

15   Christian Kelleher, "Archives Without Archives: (Re)Locating and (Re)Defining the Archive Through
      Post-Custodial Praxis," *Journal of Critical Library and Information Studies* 1 (July 7, 2017): 9,
      https://doi.org/10.24242/jclis.v1i2.29.
16   Hannah Alpert-Abrams, David A. Bliss, and Itza Carbajal, "Post-Custodial Archiving for the Collective
      Good: Examining Neoliberalism in US-Latin American Archival Partnerships," *Journal of Critical Library and
      Information Studies* 2, No. 1 (March 3, 2019): 5, https://doi.org/10.24242/jclis.v2i1.87.
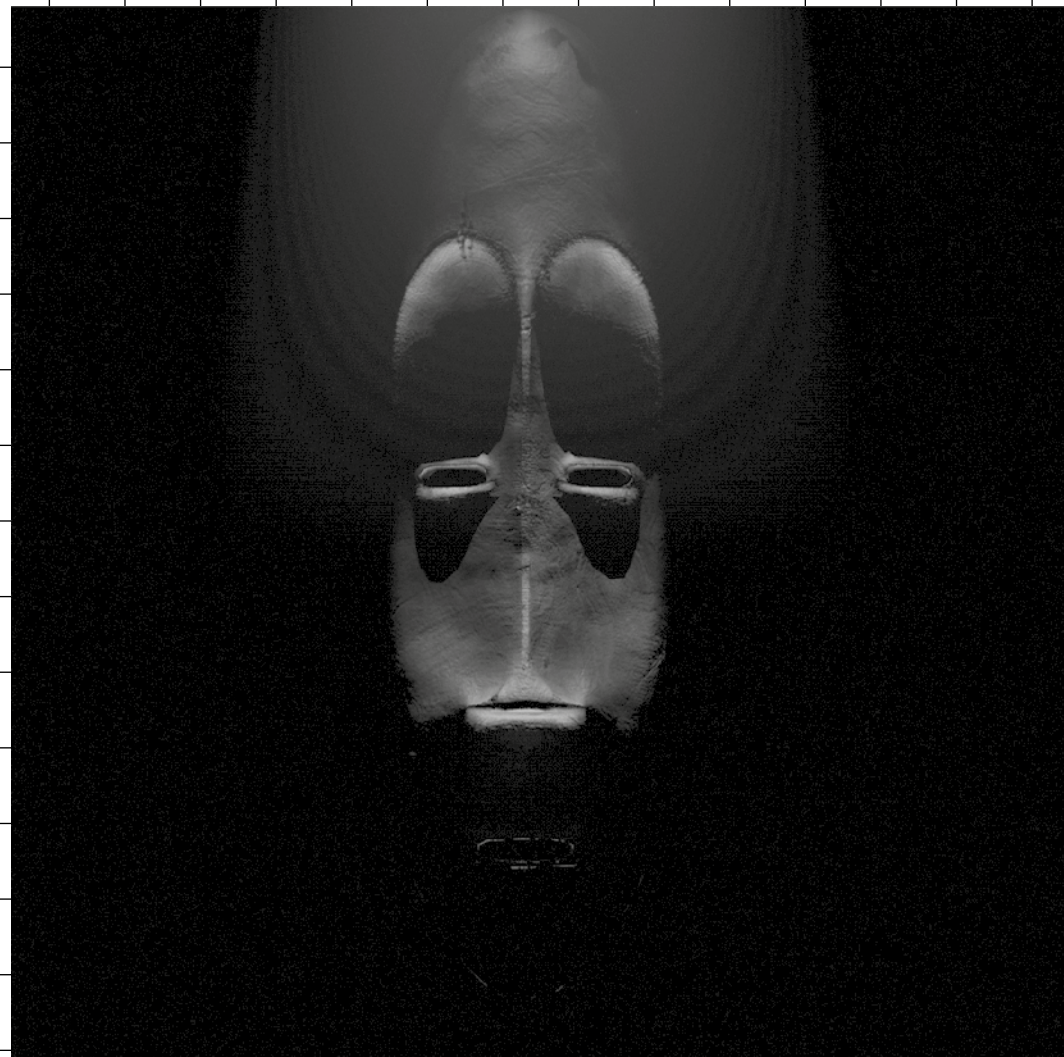
The Fulani wooden mask, utilised in burial ceremonies across West Africa.

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Archived: The Western Museum Archive as Open-World Game

PROJECT OVERVIEW

Western museums are built out of bricks cemented on imperial ideas. They do not convey the truthful story, but one of exoticism and othering.[1] 'Archived' critically examines the Western museum collection, proposing an alternative method of digital archiving in the form of an open-world game. This research aims to generate *technoheritage*[2] as an ongoing practice of decoloniality,[3] where the emancipatory potential of digital technologies is utilised to re-centre knowledge towards the Global South.

Building on the concept of animism—the belief that seemingly inanimate beings and objects all possess a distinct spiritual essence,[4] the project focuses on the West African art and craft of mask-making as a subject of study.

In Western museums and private collections, masks are viewed as artistic objects mainly appreciated aesthetically, and are stripped bare of their original function. Historically, African masks played a crucial role in traditional ceremonies—for instance, addressing tribal needs in times of war, ensuring a good harvest, or summoning spiritual presences in burial or initiation practices. Hence, masks were therefore not just symbolic; they were seen as 'spirit traps' that contained the soul for the benefits of the living. Some masks represent the spirits of deceased ancestors and the wearer of the mask is often believed to be able to communicate to the being symbolised by it, or to be possessed by who or what the mask represents.[5]

1   Tim Barringer and Tom Flynn, *Colonialism and the Object: Empire, Material Culture and the Museum* (Oxfordshire: Routledge, 1997), 12.
2   Sonia Katyal coined the term 'technoheritage' as the marriage between technology and cultural heritage. In this article, she argues that in order to understand the interconnectedness between technology and cultural heritage it is important to study the theoretical dimensions behind interactivity itself. See Sonia K. Katyal, "Technoheritage", *California Law Review, Inc.*, Vol. 105, No. 4 (August 2017): 1115, https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3030437.
3   'Decoloniality, as anthropologist Arjun Appadurai explains, "is not a successor to colonialism and coloniality… Instead, [it] offers an alternative, one that is rooted in Indigenous thought and practice about nature, community, and solidarity." But this alternative, as Appadurai assesses (and with which I [Olùfèmi Táíwò] agree) "rests on a reversal of the historical impact of capitalism and colonialism. It seeks to return us to an earlier period of precolonial splendour, when what we need to imagine, as [Achille] Mbembe argues, is an alternative future".' See Olùfèmi Táíwò, *Against Decolonisation: Taking African Agency Seriously*, (London: C. Hurst & Co. Ltd., 2022), xvii.
4   Martin D. Stringer, "Rethinking Animism: Thoughts from the Infancy of Our Discipline", *The Journal of the Royal Anthropological Institute*, Vol. 5 (1999): 541–555.
5   Rosie Lesso, "What Are African Masks?", TheCollector.com, accessed on 15th August, 2023, https://www.thecollector.com/what-are-african-masks.

The proposal explores the cycle of life, death and afterlife, effectively the entities of The Body, The Mind and The Soul through the lenses of the West African mask; where The Body materialises into the physical object, with its corresponding tangible qualities (materiality, technique, aesthetic etc.). The Mind represents the craft and knowledge of its Maker, imprinted in the artefact, while The Soul is the mask's spiritual essence, the other-than-human entity embodied in itself.

INTRODUCTION

I am interested in the political dynamics of representing cultural heritage. Specifically, I intend to surpass the notion that the modern Western paradigm represents the origin of universal consciousness.[6] Thus, through this work, my intention is to craft a form of digital heritage—a speculative prototype that is insurgent and re-centred,[7] where the use of video game engines is aimed at helping us understand cultural material in alternative ways. What remains important is that the ongoing discourse transcends issues concerning licenses and digital access to museums. Instead, what matters is who owns and mobilises data,[8] together with the integral participation of artefact makers in the archival and digitisation processes.

Historically, museum collections came from wealthy donors who benefited from the empires. For instance, doctor Sir Hans Sloane funded his enormous collection—that would become the foundation of the British Museum—with earnings from his wife's sugar plantations in Jamaica. Moreover, a significant part of the issue is how museums treat indigenous communities in their collections.[9] Museum directors often claim that indigenous works tend to appear in the archives of ethnographic museums instead of art museums.[10] Hence, this aspect does great injustice to indigenous communities and their epistemologies; the distinction helps to perpetuate the idea that these cultures are no longer living or continuing their traditions. Consequently, through this proposal I pose the following research questions: how can digital technologies be mobilised to address collective forms of resistance against colonial violence and rethink the notion of archiving in a non-extractive manner? Furthermore, how can the digital archive truthfully acknowledge colonial narratives and portray the complexities of colonial legacies? Ultimately, how can one critically engage with technology beyond merely resorting to digital solutionism?

Throughout my practice as an architectural designer, I have been negotiating the boundaries between the physical and digital realms, following

a research-driven, narrative-based approach to design. My multidisciplinary background, coupled with my academic and professional experience have stimulated my interest in the expanding definitions of architecture. I have pursued these with a focus on the role of digital technologies and environments, where I was exposed to the potential of game engines and video games as innovative tools for crafting new worlds, institutions, and representational forms within the architectural realm.

GAMING – A TWO WAY 'ECHO CHAMBER'

The field of gaming is inextricably connected with cultural practices and our everyday life. The games we both play and create serve as mirrors, reflecting the ever-shifting socio-political challenges of our times. Unfortunately, these virtual worlds often replicate and even magnify the same gender, racial and environmental biases that persist in reality. This is evident through the lack of female characters and their stereotypical representation, as well as the prevalence of violence in combat platforms and surveillance in virtual cities. In consequence, games can function as echo chambers for real-world issues, reinforcing and exacerbating societal problems.[11]

Conversely, the ideologies that originate from gaming are gaining significant influence in how our societies are governed. Interactive and immersive media is reshaping our perception of physical reality, and its impact extends beyond the gaming sphere. These influences are altering consumption habits, permeating consumer markets, and shaping societal values.[12] The convergence of gaming and our everyday lives has profound implications for how we experience and navigate the world.

GAMIFICATION

In our physical reality, gaming processes and interactive concepts have transitioned into operational frameworks for contemporary activities. The integration of gaming principles into fields beyond gaming itself, known as *gamification*, has become a pivotal socio-cultural phenomenon. This integration sustains prolonged engagement with products and services by incorporating long-standing elements of gaming, such as scoring, competition, artificial intelligence, and task-oriented approaches.[13]

Our behaviours have become measurable, mimicking gaming features like point systems, competitive dynamics, AI-driven experiences, and procedural

6   Charles Taylor, "Two Theories of Modernity", *Hastings Centre Report,* Vol. 25, No. 2 (1995): 24–33, https://doi.org/10.2307/3562863.
7   Joseph McLaren, "Ngugi Wa Thiong'o's Moving the Centre and Its Relevance to Afrocentricity", *Journal of Black Studies* 28, No. 3 (1998): 386–97, http://www.jstor.org/stable/2784740.
8   Kulturutveckling VGR, "Nora Al-Badri: Babylonian Vision – Decolonising Collections", YouTube video, accessed 15th April 2023, https://www.youtube.com/watch?v=o0_cUE_ijhk.
9   Barringer and Flynn, *Colonialism and the Object: Empire, Material Culture and the Museum,* 12.
10 Barringer and Flynn, *Colonialism and the Object,* 13.

11 Architectural Design Studio (ADS) 8 20/21 was a platform at the Royal College of Art MA Architecture programme which investigated a possible architectural agency in the way the material infrastructure of gaming and digital technologies could be developed, explored and manipulated to foster other forms of organisation that responded to contemporary challenges. Tutors: Ippolito Pestellini Laparelli, Kamil Hilmi Dalkir. See Ippolito Pestellini Laparelli and Kamil Hilmi Dalkir, *Architectural Design Studio (ADS) 8 Data Matter(s) – The Gaming Edition Studio Brief,* Royal College of Art 20/21, 4.
12 Marie Foulston and Kristian Volsing, *Videogames: Design/Play/Disrupt,* (London: V&A Publishing, 2018), 11.
13 Pestellini Laparelli and Hilmi Dalkir, *ADS 8 Brief,* 5.

instructions. This becomes evident when engaging with social media rating systems for expressing emotions with a single click, as well as health apps monitoring fitness progress. Simultaneously, the influence of gaming culture extends to visual arts, architecture, and cinema, practically transforming these domains into extensions of digital environments.[14] As gaming concepts are intertwined with other aspects of daily life, the distinction between reality and fiction becomes increasingly obscure.

METHODOLOGY

The Open-World Game as a Curatorial Instrument

I advocate for adopting the open-world game as a curatorial tool — essentially, an interactive method to approach the Western museum archive and its counterparts. Through gaming, one can not only uncover intricate layers of complexity, but also deconstruct the power structures at play. By actively involving the artefact makers in the digitisation process, as well as engaging the audience in determining the sequence of narratives through different levels of interactivity and participation, the open-world game can effectively undo the Western-centric perspectives often found in museum collections, which primarily place the role of the curator at the epicentre.

However, I acknowledge the risk of translating similar extractive problematics into the digital medium; therefore, this prototype should be interpreted as a curatorial strategy instead, focused on setting up a space for open table conversations, whereby craftsmen and artisans participate in the digital reconstruction of the archive. Moreover, I encourage consulting diverse voices and perspectives in the process of data collection; particularly, prioritising contributions from communities whose voices have been silenced or appropriated, such as indigenous peoples from West Africa, who have been directly impacted by British colonialism. Finally, through preserving and consulting materials which document resistance movements, namely photographs, documents and personal belongings of local groups, the proposal can subvert the balance of distribution of power in the Western museum archive.

At last, it is important to be critical of who owns and controls technology, for similarly to how 'the imperial shutter'[15] of the camera which immortalised historical moments into photographs that can be archived and exhibited in museums,[16] 3D reconstruction techniques can be seen as equally detrimental, continuing to exercise the Western gaze. Hence, it is advised that the artefact makers address which are the most suitable processes of documenting and recording the objects.

14   Foulston and Volsing, *Videogames*, 11.
15   'The camera shutter is not a metaphor for the operation of imperial power, but it is a later materialisation of imperial technology. Photography developed with imperialism, the camera made visible and acceptable imperial world destruction and legitimated the world's reconstruction on empire's terms'. See Ariella Aisha Azoulay, *Potential History: Unlearning Imperialism,* (London: Verso, 2019), 6–7.
16   Ariella Aisha Azoulay, *Potential History,* 7.

Digital Prototyping and Playtesting

For the purpose of this prototype, I have focused on the Fula people, also known as the Fulani nomadic tribe,[17] whose wooden masks are utilised in funeral ceremonies in Nigeria. The game proposal consists of three levels, each depicting a spatial context related to the three entities of the mask (The Body, The Mind and The Soul).

Level One – The Body

With the displacement of artefacts emerge issues of cartography, as well as indigenous people's habits, rituals and traditions, for these objects constituted worlds within worlds for the communities from whom they have been plundered. The forced migration of objects is inextricably linked to the forced migration of people who are obliged to seek a home next to the objects which have been taken away from them.[18] As such, Level One constitutes a critique of the Western museum collection, opening up with a series of West African masks. The camera focuses on the Fulani mask and its corresponding counterparts utilised in the burial masquerade. The artefacts appear seemingly inanimate next to each other in a showcase until approached by the player in the digital environment. Upon interaction, the mask becomes personified, recalling the story of its displacement. With each click, pop-up widgets with archival documentation and found video footage take over the screen, constructing a wider picture of the artefact's context, placing it spatially and temporally.

Level Two – The Mind

This level constitutes embodied knowledge, specifically, the art and craft of the mask maker, transmitted through generations; this is a digital reconstruction of a local mask workshop in Nigeria, where the tools, materials and processes are laid out for the audience to understand the making process behind each artefact. For example, African tribal artists are generally men, who train for several years, usually as apprentices to a mastercarver. The father trains his son, who is due to continue their craft through the family line. These artists hold a respectable role in African tribal society, as the creators of objects with such spiritual significance. Carvings are made using an *adze* (a small axe with a horizontal blade that chops small wood splinters from the surface) and finished with a knife and abrasives. Although joinery is increasingly common, traditional techniques involved carving objects from a single piece of wood. It is believed that carving objects of power often involves spiritual forces. African carvings are usually

17   The Fula people, often described as the Fulani, are regarded as the world's largest nomadic group: about 20 million people dispersed across Western Africa. They reside mostly in Nigeria, Mali, Guinea, Cameroon, Senegal, and Niger. They can also be found in Central African Republic and Egypt. See Richard M. Juang, "Africa and the Americas: Culture, Politics and History", *ABC-CLIO* (March 12, 2008): 512.
18   Azoulay, *Potential History,* 3.

exhibited with labels illustrating their tribe of origin; however, many peoples have well-known individual artists, who nowadays may produce works for both a local and an outside public.[19]

Level Three – The Soul

'The Soul' depicts The Essence of the object itself, taking the form of a digital re-enactment of the funeral ceremony the artefact was initially designed for, where the wearer of the mask — the dancer — becomes an intermediary between the living and spiritual world of the deceased. The mask is worn by a chosen masquerader who gives it life by wearing it in a costume that takes on a new identity. In addition, other objects corresponding to the performance of the masquerade accompany the player into contextualising the artefact, such as local tools and medicinal plants.

During the performance of the burial ceremony, the wearer of the mask enters a trance-like state which tribes believe will allow them to communicate with ancestors, or to control the spiritual forces of good and evil. Within the communities that make them, the masks are primarily spiritual objects that are made to be used. In West Africa, it is often believed that wearing masks and using them during ritualised performances such as burials and secret society initiations can connect them with spirits beyond the real world.[20]

Masquerade is a practice of transformation, usually taking place during the rites of passage, such as initiation or death. It often maintains the knowledge of insider groups, where only certain people may be allowed to see it. With some exceptions, the actual performing is a male activity, and masks representing women are worn by men. Local traditions often relate that masquerades originally belonged to women but were taken away from them and can now be made and performed by men alone.[21]

CONCLUSION

I propose that issues concerning representation ethics and bias in the digital archive need to be re-examined, given that the museum is an institution of privilege. The looting of objects from their spaces of origin renders them inaccessible to the majority. Therefore, I argue that by digitising museum artefacts one is performing an act of restoration — in effect, an exercise in worldbuilding. This proposal is founded on the belief that the digital environment, despite its origins in military research, presents a profoundly emancipatory and subversive space.

In my opinion, the digital environment serves as a cultural technique with the potential to democratise collections and histories, thereby activating artefacts and their associated narratives. While we may inhabit a post-colonial world, we also reside in a post-digital era, where the legacy of technology remains pervasive, silently permeating computing and its ubiquity.[22]

Over time, this speculative prototype could evolve into an open-source effort aiming to construct new realities for forgotten objects as a form of collective knowledge production. In future, these digital artefacts and performative interventions could challenge the prevailing power dynamics in Western museums, essentially, what Ariella Aisha Azoulay implies through 'unlearning the archive'.[23]

19   Christa Clark, *The Art of Africa: a Resource for Educators*, (New York: The Metropolitan Museum of Art, 2006), 71.
20   Walter E.A. van Beeck, "African Indigenous Religions", *Oxford Research Encyclopedias, African History,* Oxford University Press (31 March 2020): 152, https://doi.org/10.1093/acrefore/9780190277734.013.661.
21   Henry Drewal, "Art and the Perception of Women in Yoruba Culture", *Cahiers d'Etudes Africaines*, Vol. 17. Cahier 68 (1977): 554, https://www.jstor.org/stable/4391558.
22   Kulturutveckling VGR, "Nora Al-Badri: Babylonian Vision – Decolonising Collections".
23   Azoulay, *Potential History*, 195.

Marginalia' research exhibition held at the Oslo School of Architecture and Design, August 21–31, 2022, Oslo, Norway. Photo by Maryia Rusak.

Maryia Rusak (ETH Zürich)

Archives of the Ordinary: On the Archive of Research

ON THE MARGINS

Not all archives are created equal: some are treasured, while others are trashed.[1] This poses a particular problem for architectural historians who venture outside of the conventional canon: for example, those interested in little-known architects, construction companies, industrial or material producers or bureaucratic entities. Despite being responsible for a large share of the built environment today, these actors hardly make it to the pages of architectural history books and professional magazines since they engage with 'ordinary' rather than exceptional architecture. Archives of these entities are vast but full of other documents, different from the design files architectural historians usually work with. Business archives are often incomplete, endangered by the constraints and conditions of storage, contingent on the political, social, and technological forces that influence what is worth being preserved and what is to be excluded from the historical record. Historians interested in the architecture of the everyday, then, find themselves performing a version of archaeological research, stitching together 'imprints, tracks and trails of a once-living thing'.[2] What does it mean for architectural historians to engage not with canonical objects or famous practitioners but with a different research subject that occupies a marginal position? How does this position then affect both the methods and the research outcome? Based on my recent research experience from a doctoral dissertation on a Norwegian construction company, Moelven Brug and a general interest in "other" producers of architecture, this paper discusses methodological problems that arise when dealing with other, more ordinary archives that architectural historians usually forego. I argue that investigations of these other archives lead towards a more open and democratic discipline.

ON OTHER ARCHIVES

The main object of my research was an industrial company, Moelven Brug, a former sawmill located in a town some 100 kilometres north of Oslo. Founded in 1898, the company originally specialised in timber products: wooden barrels, furniture, carriages, sledges, equipment for agriculture

1   See, for example, Stamatis Zografos investigation of the qualities of different archives "On Archives" in *Architecture and Fire: a Psychoanalytical Approach to Conservation* (UCL Press: 2019), 18–38. On the violence and destruction of archives, see Jacques Derrida, *Archive Fever* (Chicago: University of Chicago Press, 1995), 19.
2   See a description of fossil-hunting at https://jurassiccoast.org/what-is-the-jurassic-coast/all-about-fossils/what-are-fossils/, accessed January 12, 2020.

and timber wheels.[3] With the mechanisation of post-war agriculture, the company's products became obsolete, and it was forced to reconsider its future. From a modest commission for "houses-on-wheels" for Oslo municipality in 1951 — *de facto* temporary barracks for construction and forestry workers — the company developed an entire eco-system of prefabricated flat timber elements and complete sections, laminated beams, chipboard panels and other wooden products. From the late 1950s, Moelven products grew intricately connected with the expansion of the post-war Norwegian welfare state, building schools, kindergartens, housing and public buildings all around the country.[4] At its height, the company employed more than 1200 people, while Moelven became a household name in Norwegian homes — by 1980, more than 85% of Norwegians were familiar with the company and its products.[5] However, despite being responsible for constructing a significant part of the built environment in post-war Norway, the company's projects remained unrecorded in architectural history books.

In part, this had to do with the general uneasy place of mass-produced buildings in architectural history. While generations of architects have been enchanted by an egalitarian promise of prefabrication, when faced with rigid production frameworks and concerns of profitability and cost, sophisticated architect-designed building systems have often been stripped bare of generous aspirations of flexibility and change. Industrial building was left as a pragmatic instrument in the hands of cost-conscious developers and construction companies, often considered anonymous 'architecture without architects'.[6] In Norway, in particular, industrial mass production had often been seen in opposition to the local tradition of craftsmanship.[7] It is not surprising then that the prefabricated buildings of Moelven never made it to the Norwegian architectural history books. So how does one study something that is no longer there and that has not been properly recorded?

The project then has largely progressed inductively, shaped by material discovered in the archives. However, time and again, it has encountered significant archival resistance: the company's industrial archive was patchy and extensively premeditated. Despite a prolific building output, few construction drawings survived. To reconstruct at least some parts of the company's operations, I had to browse through thousands of pages of organisational documents, meeting notes, procurement documents, work contracts, union agreements and salary negotiations. Jacques Derrida, in his article *Archive*

Fever, offered a psychoanalytic reading of archives: they preserve records of the past and embody 'the promise of the present to the future'.[8] The selection of what counts as knowledge appropriate for archival study is a strong act that excludes the possibility of studying objects and events that were deemed unimportant at the time of their creation. According to David Greetham, a specialist in textual studies, any decision on what is excluded or included in an archive is highly self-referential and even self-laudatory: archives strive to preserve the best, that which is at the current moment considered useful for future generations.[9] However, future actors are excluded from this decision-making: one may want to study precisely that which is deemed inappropriate, that which is excluded, silences in the archive. The case of the Moelven archive is exemplary in this regard: curated by the company's archivists it amassed only 'ready-made' documents, brochures and pamphlets, excluding the processes of product development, drawings and other communication that were deemed unnecessary. As the practice of 'archivisation' produces as much as it records the event, Moelven's archive has been largely re-produced. To develop a more open archive, I had to reach further.

ASSEMBLING THE ARCHIVE

To mediate archival gaps and silences, I traced the barely visible threads, following clues and hints as proposed by Carlo Ginzburg in his essay 'Clues: Roots of an Evidential Paradigm'.[10] Reflecting the nature of the subject — a large techno-scientific entity that operated across state institutions and different bureaucracies — I used materials from labour and union archives, architectural collections, industrial and state agencies, and city archives. Most importantly, the research benefited from an OCR-searchable digitised database of all major Norwegian periodicals, books and newspapers published in the second half of the 20th century.[11] If the advent of digitalisation has introduced higher complexity, it has most profoundly impacted the history of the ordinary.[12] Information gathered from local, regional and national newspapers allowed me to write an entirely different history of the company and its architectural production, a story that would have ended on page three if I used 'proper' architectural sources.

Despite the fact that Moelven buildings and products were absent in the post-war version of Norwegian modernity told by architectural magazines,

3   Trygve Dalseg, *Med Moelven-hjul på vei gjennom tiden: historien om Aktieselskabet Moelven Brug i de første 50 år, 1899–1949* (Moelv: Moelven Brug, 1966). More on Moelven Brug products see catalogues at the Nasjonalbiblioteket archive, Oslo, Norway.
4   See more at Maryia Rusak, 'Factory-Made: The Everyday Architecture of Moelven Brug, 1955–1973' (PhD diss., The Oslo School of Architecture and Design, 2022).
5   Oddvar Hemsøe, *Moelven 1899–1999* (Moelv: Moelven industrier, 1999), 76.
6   The expression of course refers to the title of Bernard Rudofsky's exhibition catalogue "Architecture Without Architects" (MOMA: New York, 1964). However, since then the term has been appropriated in the discussions of prefabricated architecture, for example in the introduction of Gilbert Herbert, *The Dream of the Factory-Made House: Walter Gropius and Konrad Wachsmann* (Cambridge, Mass: MIT Press, 1984), or Roger B. White, *Prefabrication: a History of Its Development in Great Britain* (H.M. Stationery Office, 1965).
7   Kjetil Fallan, 'Modern Transformed: The Domestication of Industrial Design Culture in Norway, ca. 1940–1970' (PhD diss., Fakultet for arkitektur og billedkunst, University of Oslo, 2007), 268.

8   Marlene Manoff, "Theories of the Archive from Across the Disciplines," *portal: Libraries and the Academy* 4, No. 1 (2004): 11. Jacques Derrida and Eric Prenowitz, 'Archive Fever: a Freudian Impression', *Diacritics* 25, No. 2 (1995): 9, https://doi.org/10.2307/465144.
9   David Greetham, "Who's In, Who's Out: The Cultural Politics of Archival Exclusion," *Studies in the Literary Imagination* 32, 1 (Spring 1999): 1–28.
10   Carlo Ginzburg, preface to the Italian edition in *Clues, Myths and the Historical Method* (London: The John Hopkins University Press, 1989), xi.
11   For example, my research largely benefited from archives of the main newspaper of the Norwegian Labour Party — *Arbeiderbladet* with its various regional editions; as well as series of publications by the Norwegian Building Research Institute; survey books on Norwegian housing; grey literature on planning; collections of professional magazines, like *Byggekunst*, *Bonytt* and *Bygningsarbeideren.*
12   Silje Svadberg, Andrea Holand, and Karl Joachim Breunig, 'Beyond the Hype: a Bibliometric Analysis Deconstructing Research on Digitalization,' *Technology Innovation Management Review* 9, No. 10 (30 October 2019): 39, https://doi.org/10.22215/timreview/1274.

they were very much present in the experience of ordinary people, as revealed by thousands of articles in the lay press.[13] By browsing through thousands of entries in regional and local editions of newspapers, I was able to reconstruct an impressive roster of projects whose records long vanished in the company's archives. As I was learning new Norwegian toponyms, the names of the newspapers—*Arbeiderbladet, Bergens Arbeiderblad, Hamar Arbeiderblad*, *Oppland Arbeiderblad*—spoke for themselves. Most of these titles retained a strong affiliation with the then-ruling Norwegian Labour Party and reflected the everyday experience of ordinary people in 1960s Norway. Incorporation of these other sources allowed me to expand the conventional frameworks of the field, writing a more open, 'popular' architectural history related to everyday experience of people. The open and more democratic nature of the sources—made accessible by the digitalisation efforts—thus had a direct impact on the research outcome.

The OCR search made no detail, name or reference too obscure to trace, allowing me to expand the narrow canon of Norwegian architecture and bring up names and projects unheard of before—for example, little-known architects, professional networks, figures of construction workers or female specialists. Quilting together information from newspaper entries, yellow pages, advertisements, histories written by local history clubs and several archives, I have amassed a curated *archive of research*.[14] If the project relied on re-archivisation, a process akin to re-forestation, assembling an archive from the sources that were previously discarded, what happens with this reassembled archive once the project is completed?

MARGINALIA: EXHIBITING THE ARCHIVE

My PhD defence was then accompanied by an exhibition titled *Marginalia* that dealt with the question of margins, of the leftover project archive, and the throw-away bits that didn't make it to the final publication. The idea first originated from the feeling that much of the material that has been accrued during my project was left yet again outside of the margins imposed by the formal requirements of a PhD monograph and defence presentation. The final product—a printed book—was limited by a maximum number of pages and images, where only 40 or so could be in colour. My project archive, on the other hand, consisted of more than 1,000 unique images and several

13   Moelven projects were entirely absent in the main Norwegian architectural magazines that both defined and reflected the professional discourse on architecture and interior design—*Byggekunst* and *Bonytt.* In terms of history books, Moelven projects could be literally only found on the margins on survey books on post-war Norwegian housing, for example Anne-Kristine Kronborg, *OBOS: 100 borettslag 1929–2013* (Oslo: Forlaget Press, 2014), 234–35. The company is absent in books like Arne Gunnarsjaa, *Norges arkitekturhistorie* (Oslo: Abstrakt, 2006); Nils Georg Brekke, Per Jonas Nordhagen, and Siri Skjold Lexau, *Norsk arkitekturhistorie: frå steinalder og bronsealder til det 21. hundreåret* (Oslo: Samlaget, 2003); Odd Brochmann, *Bygget i Norge: en arkitekturhistorisk beretning* (Oslo: Gyldendal, 1981).
14   For local history books see Ove Johansen, *Moelvboka: modalshistorie i tekst og bilder* (Moelv: Moelvboka v/ styret, 1986); Ola Alsvik and Jan Haug, *Storkommunen: Ringsaker* (Brumunddal: Brøttum historielag, 2006); Ola Alsvik et al., *I krig og fred, Ringsakboka* (Brumunddal: Brøttum historielag, 2001). The role of local historical collectives in preserving the history of the company becomes apparent when comparing a local wiki page dedicated to Moelven against a general, and far less detailed, Wikipedia entry. See https://lokalhistoriewiki.no/wiki/Moelven_Brug; https://no.wikipedia.org/wiki/Moelven_Industrier. Accessed April 10, 2022.

thousand newspaper clippings that I wanted to share with the broader public. Beyond the re-assembled archive of Moelven projects, my collection had yet another layer—that of project notes. The fleeting notes taken on the go, short scribbles of ideas, flimsy thoughts, potential research directions, good sentences that came to mind, paper structures, ideas from conversations with colleagues, doodles during phone calls, intermingled with miscellaneous to-do and shopping lists—all constitute a different, extra-textual layer of our own project archives. The exhibition was then not a curated collection but rather an assemblage of images, documents, texts and archival pieces accumulated over the last four years that I wanted to share with more people.

In exposing personal notes, the meta-layer of the project's archive, I saw parallels with the marginalia on the books—side notes scribbled by previous readers that we sometimes encounter. These marks offer an intimate insight into the usually-conceived process of thinking, while the next reader could continue this inter-textual conversation with their own markings. By showing personal notes documenting the thinking as the project progressed, the exhibition exposed this often-concealed world of a PhD in the making, of the many ideas, thoughts and indeterminate detours that any research can take. The exhibition then featured several large notebooks filled with notes on the research process, alongside secondary literature pieces with bookmarks and printouts from academic journals with notes on the margins. A stationary computer positioned in the middle of the exhibit contained a collection of more than 3,000 project and archival notes amassed with note-taking software, as well as images of several thousand archival documents.

By establishing a horizontal relationship between the primary archival materials, secondary literature and my project notes—all laid out on a horizontal datum of a table, I wanted to forego the hierarchical differences embedded in the way we approach historical information. The table became a mock version of a historian work-station, where visitors would be able to browse through both the primary and secondary sources, follow some of my project notes and perhaps discover something on their own. By taking their own notes along with the already-existing ones, the visitors would contribute to creating a hyper-textual document that testifies to the multi-layered potential of any historical research. In doing so, I specifically wanted to highlight the indeterminacy of the way in which we structure our research—the many often arbitrary decisions that shape the narrative arcs of our work. The exhibition then was conceived not as a static project but rather as an illustration of a work-in-progress, a workshop, a working station. Indeed, as the exhibition stayed open for more than a week, visitors interacted with original material and approached me as they recognised their homes, schools and playgrounds in the company's many projects. It was particularly exciting to see an IT department person or one of the technical management employees lighten up as they discovered a direct connection between the perceived detached 'academic' research and their own lives. The exhibition thus offered a more open format of the outcome of academic research, rather than the formal PhD book or a defence full of hard-to-decipher professional jargon.

RESEARCH FOR AN OPEN SOCIETY

Expanding the conventional toolkit of architectural history and venturing into different types of archives — lay press and popular newspapers — allowed me to write a different, more democratic architectural history, often overlooked in conventional architectural historiography. Defined by the conditions of archival scarcity, this led me to re-assemble a broader and more open archive of research. If we are to build better, more egalitarian and open architecture, these works need to be grounded within more open, accessible, egalitarian sources that incorporate a polyphony of voices and opinions of multiple actors. By exposing the archive of my research that would otherwise be discarded, I wanted to engage with broader questions on the nature of archival practices that we both encounter and propagate in our research. As historians of the every day, we often deal with incomplete archives, lamenting gaps and absences. At the same time, our own research remains an opaque artefact, while the archive is stored privately and discarded. Could we apply the developments in digitalisation to our own archives? Could archives of research become more open and accessible? Removing opaqueness from the process of research could be the first step towards dismantling the academic ivory tower and making academic research more transparent and welcoming to others.
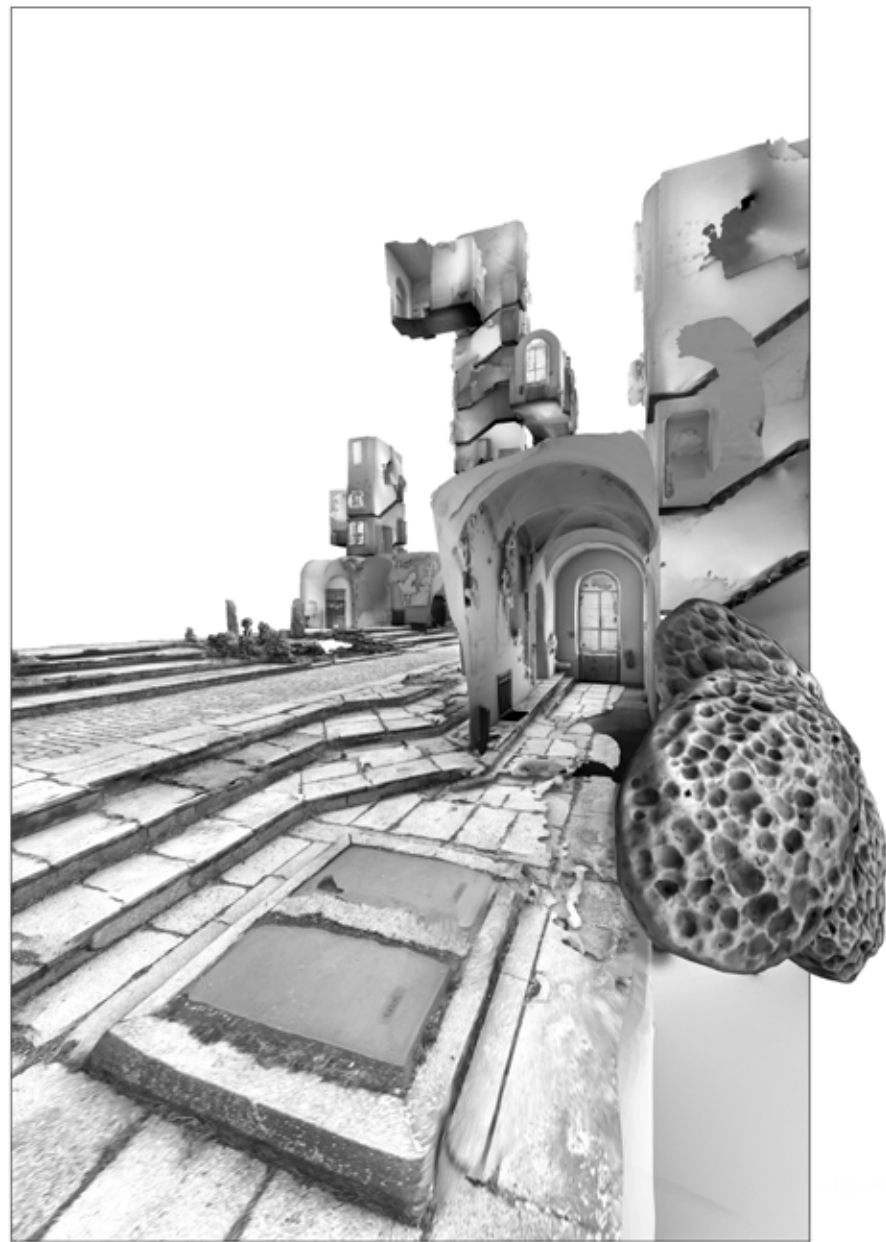
Three-dimensional urban assembly based on different forms of 3D-scanning. Image by Maria Kyrou.

Maria Kyrou (Universität der Künste Berlin)

Immersed in a Virtual Harvest: Formation of a Narrative-Driven, Spatial Archive Based on 3D-Scanned Architectural Assemblies

TRACING THE CONTEXT−FUSING THE PRACTICES

Weaving together practices of urban documentation with emerging digital media, this paper outlines an experimental educational format. Situated in the city of Berlin, its scope is to create a 3-dimensional, virtual archive comprising 3D-scanned, urban fragments. In this process, it seeks to enable participants to formulate subjective spatial narratives, while initiating through the archive a dialogue on their collective experience of the city.

Informed by the multiplicity of the Berlin University of the Arts, this educational format addresses a wide range of study programs that relate to spatial practices − including architecture, communication and costume design, as well as art in context and scenography. A unified creative workflow and a diverse spectrum of applied media enable transdisciplinary groups to collaborate in an open exploration and co-creation process.[1]

The proposed virtual archive emerges from an association between the practices of Psychogeography and the medium of 3D scanning. While Psychogeography explores the subjective experience and connections between different urban places, 3D scanning has a unique way of producing spatial artefacts that, depending on the selected technology, can vary widely from their original subject. Treated as a technological *détournement*,[2] this representational deviation is applied as an expressive creative medium, which subjectively transforms the spaces that it captures. By further interpreting Unitary Urbanism's ideal of an urban space that fuses the *functional* with the *ludic*,[3] these 3D spatial fragments are collected

1   This interplay on format, lying between an educational scenario and a future form of the architectural archive, is inspired by the author's current engagement in the field of experimental media didactics, in the context of a three-year, transdisciplinary project of the Berlin University of the Arts, Project InKüLe − Innovationen für die Künstlerische Lehre, which is supported by the Stiftung Innovation in der Hochschullehre. Beyond the excitement of digitisation, emerging digital media are treated here as drastic catalysts, affording new ways of creating and experiencing, teaching and learning. For further information on the objectives and the documented results of the project, see Maria Kyrou, "Convergent Infrastructures − a Two-Part Tale on Tools and the Narratives That Drive Them from the Berlin University of the Arts," 2022, https://www.inkuele.de/inkuele-schriften-vortraege/details/convergent-infrastructures.

2   Guy Debord and Gil Wolman, "A User's Guide to Detournement," in *Situationist International Anthology*, ed. Ken Knabb (Berkeley: Bureau of Public Secrets, 2007), 14−22.

3   Gil Wolman, "The Alba Platform (Lettrist International, 1956)," in Knabb, *Situationist International Anthology*, 22.

and combined in the interactive environment of a game-engine. Within this virtual realm, the archive emerges gradually as an open, experiential 'scaffold', through process-oriented and narrative-driven strategies of 3D capture and assembly.

BETWEEN MEDIUM AND PRACTICE:
ASSOCIATING PSYCHOGEOGRAPHY TO 3D SCANNING

A first reply is explored in following, with two elements of this proposal — psychogeography and 3D scanning — briefly examined. The intention here is to make space for conceptual reflection, before crystallising the format into a linear description and a mediated workflow.[4] In this initial overview, the format's elements may fluidly interact and associate, echoing the aquatic origins[5] of the *dérive.*[6]

Psychogeography itself has been described not so much as a field, but 'as the traversing of one',[7] crossing a wide spectrum of disciplines, yet pledging a clear allegiance to none.[8] This is also how it is considered in the present paper — beyond the attempted scientific purity of the Situationist canon[9] — as the interwoven tale of previous literary movements and traditions,[10] histories of walking[11] and associated forms of artistic practice.[12] A common thread across this tale is the urge to directly engage with the urban environment through the act of walking its streets — yet not through prescribed pathways and territories, but embracing instead practices that cover the spectrum from imaginary, random and unconscious, to subversive and transformative. For each of these practices, a form of documentation accompanies the walker, ranging from collage[13] to street photography[14] and film.[15] It is this tradition of documentation that 3D scanning will endeavour here to continue, not only as a technological possibility, but as a practice of representation.

Evolving steadily since the second half of the 20th century,[16] 3D scanning refers to the process of analysing a real-world object or environment with the purpose of creating a digital, three-dimensional representation, usually recreating the geometry and texture information of its original. This on-going development not only increased the accuracy and diversity of 3D scanning technologies, but also contributed to their democratisation,[17] with techniques like photogrammetry and LiDAR[18] currently available through a multitude of mobile phone applications. Within archive practices, 3D scanning weaves into the broader thread of digitising cultural heritage,[19] enabling new ways of making it accessible.[20] In the field of architecture, its broad use includes site inspection and documentation,[21] restoration, virtual exhibitions,[22] as well as spatial analysis[23] and forensic investigation.

Yet, so far this is a tale of application and efficacy, and for the proposed format it is not *what* 3D scanning can do, but *how* that matters. Recognised as a technological *détournement*, 3D scanning workflows can be paraphrased to offer results that are highly subjective and considerably different from the originally captured form.[24] This is particularly the case with photogrammetry and LiDAR scanning techniques, where the speed, direction and pathway of capture can lead both to the *accidental* inclusion of fragments in the digital form and the *intentional* fusion between captured subject and surrounding space.[25] Interpreting this process from a psychogeographic point of view, 3D scanning is considered here as a poetic practice of documentation and movement, whose own rhythm and duration matches the step of the prospective *flâneur*. According to Larousse, the verb *flâner* refers to the act of 'wandering without aim, stopping once in a while to look around'.[26] It is through this lingering time of observation

4   For as Donna Haraway argues, 'it matters what stories we tell to tell other stories with; it matters what concepts we think to think other concepts with.' See Ursula K. Le Guin, Lee Bul, and Donna Haraway, *The Carrier Bag Theory of Fiction* (London: Ignota, 2019), 10.
5   McKenzie Wark, *The Beach beneath the Street: The Everyday Life and Glorious Times of the Situationist International*, Paperback edition (London New York: Verso, 2015), 22.
6   Guy Debord, "Theory of the Dérive," in Knabb, *Situationist International Anthology*, 62–66.
7   Will Self, "The Frisson," *London Review of Books*, 20 January 2014, https://www.lrb.co.uk/the-paper/v36/n02/will-self/the-frisson.
8   Rebecca Solnit, *Wanderlust: a History of Walking* (London: Granta, 2014), 4.
9   In 1955 Debord defined Psychogeography as 'the study of the precise laws and specific effects of the geographical environment, consciously organised or not, on the emotions and behaviour of individuals.' See Debord, "Introduction to a Critique of Urban Geography," 5.
10   Merlin Coverley, *Psychogeography*, Revised and updated new edition (Harpenden: Oldcastle Books, 2018), 13–18.
11   I refer here to Rebecca Solnit's narrative of how walking transcends the history of evolution and anatomy to enter the history of imagination and culture. See Solnit, *Wanderlust*, 3–4.
12   Karen O'Rourke, *Walking and Mapping: Artists as Cartographers*, First MIT Press paperback edition, Leonardo (Cambridge, Massachusetts London, England: The MIT Press, 2016), 1–26.
13   Thomas F. McDonough, "Situationist Space," *October* 67 (1994): 59–77, https://www.jstor.org/stable/778967.
14   Susan Sontag, *On Photography* (S.l.: RosettaBooks, 2020), 42–43.
15   An example here is the filmography of Patrick Keiller. See Coverley, *Psychogeography*, 166–70.

16   Varun Batra and Vijay Kumar, "Developments in Three-Dimensional Scanning Techniques and Scanners," in *Emerging Trends in Mechanical Engineering*, ed. L. M. Das et al., Lecture Notes in Mechanical Engineering (Singapore: Springer Singapore, 2021), 59–88, https://doi.org/10.1007/978-981-15-8304-9_5.
17   Carlo Bianchini and Lorenzo Catena, "The Democratization of 3D Capturing: An Application Investigating Google Tango Potentials," *International Journal of Humanities and Social Sciences* 13, No. 5 (April 2019): 594–8.
18   Acronym of 'Light Detection and Ranging.' For a description of both techniques, see "3D Scanning," Wikipedia, last modified August 21, 2023, 15:53, https://en.wikipedia.org/wiki/3D_scanning.
19   Melissa Terras, "Cultural Heritage Information: Artefacts and Digitisation Technologies," in *Cultural Heritage Information: Access and Management*, ed. G. G. Chowdhury and Ian Ruthven, IResearch (Facet, 2015), 63–88, https://doi.org/10.29085/9781783300662.005.
20   Lise Skytte Jakobsen, "Flip-Flopping Museum Objects from Physical to Digital – and Back Again. Engaging Museum Users through 3D Scanning, 3D Modelling, and 3D Printing," *Nordisk Museologi*, No. 1 (1 January 2016): 121, https://doi.org/10.5617/nm.3068.
21   '3D Digital Archive – Nakagin Capsule Tower – gluon', gluon, 24 July 2022, https://gluon.tokyo/en/projects/3d-digital-archive-nakagin-capsule-tower.
22   "Bartlett Digital Exhibition Apps | University College London," accessed August 25, 2023, https://scanlabprojects.co.uk/work/bartlett-digital-exhibition/.
23   Arianna Salazar Miranda et al., "Favelas 4D: Scalable Methods for Morphology Analysis of Informal Settlements Using Terrestrial Laser Scanning Data," *Environment and Planning B: Urban Analytics and City Science* 49, No. 9 (2022): 2345–62, https://doi.org/10.1177/23998083221080174.
24   Jan Tepe, "WEARING DIGITAL BODIES: Designing and Experiencing Dress as Poly-Body Objects at the Intersection of the Physical and the Digital," in *4th NTU-Conference-Proceedings | IFFTI : International Foundation of Fashion Technology Institutes* (Fashion Reimagine, Nottingham Trent University, 2022), 298–395, https://site.iffti.org/ntu-conference-proceedings/.
25   The elements of randomness (Surrealists) and intentional rerouting (Situationists) have been a prominent part of different facets of psychogeography, and are explored here as a link between psychogeographic theory and the process of 3D scanning.
26   Zygmunt Bauman, 'Desert Spectacular', in *The Flaneur (RLE Social Theory)*, ed. Keith Tester (Routledge, 2014), 138, https://doi.org/10.4324/9781315765389.

and transcription, that the medium of 3D scanning becomes a part of this proposal, while a combination of photogrammetry and LiDAR techniques is chosen due to their availability and ease of use.[27]

ACROSS DIFFERENT CONTEXTS AND TIMELINES: THE 'LUDIC' AS A CONNECTING THREAD

Attuned to both conceptual and practical facets of psychogeography,[28] the proposed archive revisits them through the affordances of contemporary digital media; specifically, 3D scanning's ability to capture three-dimensional urban fragments and a game-engine's ability to re-assemble these fragments into a non-linear spatial narrative. Dispersed across different contexts and times, the link between psychogeographic practice and emerging digital media is formed through the concept of the *ludic*.

In his book *Homo Ludens*,[29] Dutch historian, Johan Huizinga, established the role of play as a fundamental element of both culture and social life.[30] In the second half of the 20th century, his ideas influenced the social dialogue in Europe, which sought ways to heal from the physical, mental and psychological impact of the second world war.[31] In a parallel underground route, the concept of play also nurtured the thought of European avant-garde groups and their visions for a reality beyond the functionalist dogma.[32] Notably, Huizinga's ideas contributed to Constant Nieuwenhuys' urban vision of the 'New Babylon', where play would be constitutional for the new urban experience; informing not only the newly-emerging urban ambiences (*Situations*), but also the urban form itself.[33] The latter would be made possible through the future abilities of technology, envisioning the abstract scaffold-like form of a global city in constant flux.[34]

27 Describing his vision for the ludic city of the future, Constant Nieuwenhuys writes, 'New Babylon is the product of the creativity of the masses, based on the activation of the enormous creative potential which at the moment lies dormant and unexploited in the people.' With a powerful medium for space representation available at each urban walker's pocket, Constant could well find a (distorted and partial) reply to his call. See Merijn Oudenampsen, "Back to the Future of the Creative City, An Archaeological Approach to Amsterdam's Creative Redevelopment," *Variant* 31, accessed August 25, 2023, https://romulusstudio.com/variant/31texts/31FutureCity.html.

28 I refer here to psychogeography's ability to balance between the realm of ideas and the realm of practices, claiming that each of these two realms can be re-interpreted through emerging digital media. Its conceptual facets are expressed through psychography's ability to produce imaginary visions and conceptions of the urban, ranging from Blake's 'New Jerusalem' to Constant's 'New Babylon.' These visions are often intertwined with their contemporary realities, just like Blake described his imaginary city emerging from within London's topography. Combined with the practice of walking and urban documentation, 3D scanning is able to produce a new imaginary field — a fragmented, distorted and re-assembled vision of the urban. See Coverley, *Psychogeography*, 13, 41–44.

29 Johan Huizinga, *Homo Ludens: a Study of the Play-Element in Culture* (Kettering, OH: Angelico Press, 2016).

30 Stephen Grabow and Kent F. Spreckelmeyer, *The Architecture of Use: Aesthetics and Function in Architectural Design* (New York: Routledge, 2015), 51.

31 Kristen Kubecka, "Homo Ludens: Play, Subversion, and the Unfinished Work of Constant's New Babylon," *Senior Projects Spring 2018*, 1 January 2018, 3–4, https://digitalcommons.bard.edu/senproj_s2018/156.

32 Andrew Hussey, "Mapping Utopia: Debord and Constant between Amsterdam and Paris," in *Paris-Amsterdam Underground*, ed. Andrew Hussey and Christoph Lindner, Essays on Cultural Resistance, Subversion, and Diversion (Amsterdam University Press, 2013), 37–48, https://www.jstor.org/stable/j.ctt6wp6td.7.

33 Constant Nieuwenhuys, "Lecture at the ICA (1963)," in *Constant: New Babylon*, ed. Museo Nacional Centro de Arte Reina Sofía (Madrid: Publications department of MNCARS, 2015), 198–201, https://www.museoreinasofia.es/en/publicaciones/constant-new-babylon.

34 Simon Sadler, *The Situationist City*, 3. print (Cambridge, Mass.: MIT Press, 2001), 127–32.

Along another timeline, Huizinga's work became central for a very different aspect of culture and technology, the development of game studies.[35] His initial reference to a *magic circle*, as any predefined time / territory where the rules of a game apply,[36] was further adapted at the end of the 20th c. for the field of digital games.[37] Here, the rules-of-play were transcribed into a framework of game mechanics,[38] which with the parallel rise of game-engines acquired an ontology of its own.[39] The game-engine gradually transformed into a malleable scaffold itself, able to host ever changing fields of experience. Due to its ability to create high-resolution digital replicas of real-world objects and environments, 3D-scanned artefacts have long occupied these digital vistas. Yet, perhaps more importantly, a game-engine as a spatial medium may become the ground, where multiple narratives can simultaneously evolve in a non-linear fashion.[40] This element associates game-engines to previous forms of psychogeographic documentation, like the digressive surrealist novels or the experience of navigating the city through a rerouted situationist map.[41]

BETWEEN PHYSICAL EXPLORATION AND VIRTUAL NARRATIVE: THE ARCHIVE AS AN OPEN 'SCAFFOLD'

The three elements analysed so far form the constellation within which the proposed Archive is inscribed. To align their different facets towards a common process, three terms are appropriated from different fields of psychogeography, and are retoured to pave a workflow across analogue and digital realm. All three terms are kept in their original verb form, seeking to highlight both their previous context and the literal practice they represent. The corresponding workflow is briefly sketched below.

Dériver:[42] To Explore the Physical

The first phase invites the participants into an urban drift within different territories of the city, while also providing a hands-on introduction to psychogeographic practice. Therefore, it begins with a set-up of

35 "Magic Circle (Virtual Worlds)," in *Wikipedia*, 21 November 2021, https://en.wikipedia.org/w/index.php?title=Magic_circle_(virtual_worlds).

36 Huizinga, *Homo Ludens,* 10.

37 Katie Salen Tekinbaş and Eric Zimmerman, *Rules of Play: Game Design Fundamentals* (Cambridge, Mass: MIT Press, 2003), 93–94.

38 Beat Suter, "Rules of Play as a Framework for the 'Magic Circle'," in *Games and Rules: Game Mechanics for the 'Magic Circle'*, ed. René Bauer, Mela Kocher, and Beat Suter, Media Studies, volume 53 (Bielefeld: transcript Verlag, 2018), 23–24.

39 "Game Engine," in *Wikipedia*, 22 August 2023, https://en.wikipedia.org/wiki/Game_engine#History

40 Beat Suter, "Narrative Patterns in Video Games," in *Narrative Mechanics: Strategies and Meanings in Games and Real Life*, ed. Beat Suter, René Bauer, and Mela Kocher, 1st ed., Vol. 82, Edition Medienwissenschaft (Bielefeld, Germany: transcript Verlag, 2021), 67–75, https://doi.org/10.14361/9783839453452.

41 Sadler, *The Situationist City*, 82–89.

42 Far from an act of 'sanitation,' the political dimension of the *dérive* remains deeply relevant to the subject of the Archive, yet this exceeds the narrative that the present paper can cover. I can only reiterate here Merlin Coverley's observation that across different eras and approaches of psychogeography, the imaginative reworking of the city was steadily coupled with a spirit of political alertness and the enactment of radically new ways of living. See Coverley, *Psychogeography*, 32.

'mental gear': during the peripatetic exploration all participants are interconnected via a web-radio app[43] and the workshop guide[44] walks them through the routes and stories of either previous participants of this format or psychogeographic practitioners that are currently active in Berlin.[45] Transitioning towards a more active part, three further steps are introduced to inspire a narrative-driven urban documentation: *return/ depart – deviate – associate.* In a brief outline, this is a process that begins with the return to a selected territory in the city that fits a commonly defined theme, and it then develops into deviating pathways as the participants trace further associations upon this theme. During this process, different methods of 3D scanning are made available, helping them associate their narrative-intention and desired qualities to their captured spatial fragments. In parallel, additional media of documentation are encouraged, including written notes, sketches and audio recordings.

Robinsonner:[46]
To Transcribe the Physical into the Virtual

This phase is devoted to the transcription of the gathered documentation into the environment of a game-engine, a process which begins for each participant with the curation of their gathered content. The 3D-scanned fragments are organised into a first digital assembly, while non-formal narratives are transformed into each fragments' annotation. Combining subjective and objective descriptions, this narrative annotation becomes the corelated metadata of each formed assembly. In parallel, it serves as a navigation tool for the forming Archive as a whole, as it makes the content of each singular project accessible to others.

Flâner:[47]
To Explore the Virtual

The third phase celebrates the immersion within the virtual Archive across a palimpsest of different urban assemblies. The annotation of each individual project has contributed to a common diagram of qualities and concepts, forming a common, fragmented and ever-evolving urban narrative. This diagram becomes then a new exploration milieu, as different projects can

be associated to one another, allowing unique assemblies to emerge. Based on their semantic association, clusters of newly formed spatial narratives can then be commonly explored. This for example can take the form of a collective virtual dérive attended from different physical locations across the world.

AN OPEN-ENDED CONCLUSION:
FROM ASSOCIATED CONCEPTS TO EMERGING PRACTICES

Through the presented workflow, the initial triptych of psychogeographically-informed practices, *return/depart – deviate – associate*, gradually leads to the collection of narrative fragments, which in turn drive the assembly of virtual spaces. Thus, they enter anew the realm of experience, this time however not as a response to a physical space, but as the multitude of semantic[48] nodes that formulate a virtual one. Reduced down to its core, the contribution of the proposed archive is the combination of the subjective and individual experience of the city with this abstract semantic representation, which may also be shared and experienced by others.

With this fusion, it might also contribute to an old contradiction: As Coverley notes, Debord's effort to transform psychogeography into a purely scientific discipline came in stark contrast with the subjective character of human emotion, while similar programmatic approaches failed to reach the imaginative reforming of the environment that marked pre-situationist movements and traditions.[49] Through the described format, the archive emerges not as a rigid system, but as a malleable site. Like ebb and flow, the phases of *(dériver – robinsonner –)* allow the archive to iteratively condense and expand, while transforming it into the possible host of multiple micro-processes and interactions (*– flâner*). Its content could be perpetually edited, cross-referenced, explored from within and even performed. It could be constantly transformed and re-imagined.

On this basis, a first charting of potential is attempted, identifying emerging fields of practice that could further activate the proposed format:

In view of the constantly increasing collections of digitised cultural artefacts across scales and typologies,[50] what could be the contribution of such an archive in promoting the rise of architectural 3D-scanned collections, while critically navigating and sourcing new insight from their content?

43 On a parallel level, this is a reference to the use of walkie-talkies during the first Situationist *dérives* in Amsterdam and Strasbourg. See Kristin Ross and Henri Lefebvre, "Lefebvre on the Situationists: An Interview", *October* 79 (1997): 73, https://www.jstor.org/stable/778839.
44 This term was consciously preferred over a description that would denote hierarchy, like 'workshop leader.'
45 As is for example, Paul Scraton. See "Berlin Walks," *Under a Grey Sky* (blog), 23 February 2013, https://underagreysky.com/strolls-and-tours/.
46 Robinson's figure is defined by Coverley as Flâneur's alter-ego, who, instead of the direct experience of the streets is traditionally associated with an imaginary or internalised journey. See Coverley, *Psychogeography*, 78–89.
47 Preferred over its situationist alternative, as it is not so much attuned to the detection of urban ambience as to an alert, acute observation of its — in this case virtual — surroundings. Under the title, 'Flâneur VR,' the author has already proposed an XR exhibition format, utilising 3D scanning and focused on the correlation of analogue with digital materialities. See Kyrou, "Convergent Infrastructures," https://www.inkuele.de/inkuele-schriften-vortraege/details/convergent-infrastructures.

48 The term 'semantic' is used here in the neurocognitive sense. See Mathias Benedek et al., 'The Role of Memory in Creative Ideation', *Nature Reviews Psychology* 2, No. 4 (27 February 2023): 246–57, https://doi.org/10.1038/s44159-023-00158-z.
49 Coverley, *Psychogeography*, 27.
50 Along with the UCL exhibition format that has been mentioned before, indicative is here the 3D-scanned artefact collection of the Smithsonian, featuring an eclectic amalgam of pop culture, history of space exploration, palaeontology and natural sciences. See "3D Digitisation," accessed August 25, 2023, https://3d.si.edu/.

Informed by the emergence of contemporary initiatives which mix physical and virtual place-making,[51] what could be the role of such an archive in promoting dialogue and awareness on the form of the urban environment and public spaces?

Inspired by the possibility of forming an active link between urban physical and urban virtual spaces, how could the proposed format contribute to a deeper understanding of different historical layers and improbable topographies within a city?[52]

At any application case, a diversity of view and the mixture of learning mindsets and communities is recognised as a crucial element. While the proposed archive can be collectively curated, it is nevertheless an assemblage that lays no claim to an undisputable truth. It aspires instead to the dissemination of multifaceted perspectives and the celebration of untold stories.

Echoing Ursula K. Le Guin's definition of the *carrier bag* as the primal technological tale,[53] the final form of the archive emerges as both content and container, equally formed by spatial narratives and the technologies that enable their assembly. Based on a critical interpretation of emerging digital media and their association to practices past, it seeks to define an open and ever-evolving 'scaffold' for the reflection of the present; transforming the archive itself into a realm of urban reflection and collective exchange across the analogue and the virtual.

51   I refer to initiatives, like Spectra Cities and InCitu. At the intersection of physical placemaking, virtual worldbuilding, and cooperative governance, Spectra Cities has developed an array of digital tools and platforms to explore people-powered city making across spatial realities. See Ryan Rzepecki et al., rep., *Spectra Whitepaper: Building a Sustainable, Livable, and Affordable City for 1 Million People Through Multilayer Blockchain Cooperatives and Extended Reality Experimentation.* (Spectra Cities, 2023), 11–10; "Papers | The City That Builds Cities," Spectra, accessed August 25, 2023, https://www.spectracities.com/papers/.
52   A reply to the latter will be explored by the author at the beginning of November 2023 in a collaboration with Prof. Pablo Dornhege (HTW Berlin). The first phase of the proposed format, *dériver*, will be applied as a daily workshop / urban walk for a transdisciplinary group of students, coming both from the Berlin University of the Arts (UdK) and the Berlin University of Applied Sciences (HTW).
53   And therefore, echoing also Elizabeth Fisher's work, whose Carrier Bag Theory of human evolution inspired the concept's celebrated transcription by Le Guin into the field of serious fiction. See Le Guin, *The Carrier Bag Theory of Fiction*, 30–37; Elizabeth Fisher, "The Carrier Bag Theory of Evolution," *Woman's Creation: Sexual Evolution and the Shaping of Society*, 1st ed (Garden City, N.Y: Anchor Press, 1979), 61–56.

Dr. Yinka Williams, part of the research team in Nigeria, visiting the Michael Olutusen Onafowokan (1912–1991) archive in Lagos, preparing selections for digitisation. Courtesy of Dr. Yinka Williams and Onafowokan Cityscape ltd.

Martien de Vletter (CCA)

From Collecting to Connecting or How not to Collect

At the CCA (Canadian Centre for Architecture) we consider the Collection as a repository of ideas, provocations, inspirations, and trials and errors. The Collection documents the culture and production of architecture worldwide from the Renaissance through to the present day. It is made up of interrelated bodies of primary and secondary materials such as archival holdings, prints and drawings, photography, monographs and periodicals, audiovisual and (born)digital material, toys and games, miniatures, posters and postcards. However, for the CCA it has never been about what we have, but how to activate it considering current disciplinary and cultural issues. As contemporary issues are continuously changing, our thinking of how to activate the Collection is too.

The Collection, reflecting the institutional activities, included mainly (but certainly not only) materials from and about North America and Europe, while at the same time always addressing and seeing architecture from a transnational perspective. The Collection is not encyclopaedic, and we constantly reflect on priorities, geographies, and societal issues to be addressed, or reflecting on our own past actions. Our exhibitions and research projects often drive to rethink the Collection, or the other way around. In this paper I address the changing ideas on collecting itself based on our multidisciplinary research projects but will start with our changing ideas on descriptions and discovery, hence access to the Collection as the future of archives or collecting is based on questions of access.

In September 2020, the CCA began a Critical Cataloguing and a Reparative Description initiative to address issues of injustice and exclusion embedded in the descriptions of objects held in our collection.[1] A group of CCA archivists, librarians, and curatorial staff reviews biased, inappropriate, harmful descriptions and classifications in the photography collection and our archival holdings. The goal is to develop inclusive description and metadata strategies that will improve discoverability of histories, narratives, and contexts that would otherwise not appear in object records.

One of the first steps towards addressing how the CCA, as a cultural institution, has been replicating or perpetuating colonial or settler dynamics is to identify and foreground voices and subjects that have not been recognised. And we believe that this entails reviewing and revising the longstanding practices we have used to describe works in our collection. These descriptions affect and even determine how collection objects are discovered and interpreted, both within and outside the CCA walls. Any bias

1   "Critical Cataloguing and Reparative Descriptions," Canadian Centre for Architecture, accessed August 18, 2023, https://www.cca.qc.ca/en/82982/critical-cataloguing-and-reparative-descriptions.

embedded in the language and scope of descriptions, potentially including inequity and systemic racism, will therefore have an impact on the work they might help to generate. Descriptive practices are not neutral: what information is included in and excluded from collection descriptions is influenced by professional biases, national and international standards for creating metadata, and terminology that often conveys a particular world view.

Systemic biases are often evident in how information is classified—what subject headings are applied or how an object is catalogued in relation to other content. Whereas inappropriate language in an object description, in the title for example, may be due to a lack of knowledge on the part of the person who formulated the title, or simply because language has evolved, rather than necessarily problematic description practices. To this end, we expect to identify harmful language and to address absences and inadequacies of information.

A similar process is being applied to the descriptions of our archival holdings. We are in the process of developing new strategies and workflows to describe and contextualise the CCA archival holdings in a more inclusive and equitable way. We intend to challenge and upend our current standards across all aspects of the archival management lifecycle, from acquisition through to description to how we make our archives accessible with finding aids. While they can be great for discovery, like cataloguing and classifying, finding aids are deeply subjective and can perpetuate inequity and harm. We are using a mix of automated tools and manual reading to gather data about the use of harmful terminology, lack of contextual information and absences in our existing finding aids. This initial work will allow us to highlight the most urgent issues in our descriptions, so we can prioritise which edits must be made. The next step is to find meaningful approaches to redescribe our archival holdings to reduce harm for our public and reveal hidden voices within our archives. This work is especially pertinent for our Canadian holdings given the complex relationship between settlers and Indigenous communities in Canada.[2]

The work of Critical Cataloguing and Reparative Description should be seen in parallel with a more in-depth process of rethinking our Collection and collecting in general. The digital transformation at the CCA is allowing the institution to rethink many of its collecting processes. We question, if the role of the institution is still only to collect and give access, or if it also can be to research and give access.

POST AND NON-CUSTODIALISM

When discussing with the scholars of the 'Centring Africa: Postcolonial Perspectives on Architecture'[3] project in 2018 the question, if collecting material from the African continent was considered an ethical act or not, some of the scholars said it was unequivocally not. To some of them, extracting archives created in and about Africa and including them in the CCA's Collection will reiterate a colonial act. Even if the CCA is considered a 'safe haven' or even a way to salvage those archives, for some it could still constitute an unethical act. This led to a conversation on other possible models. Deposits is one model (wherein CCA would take care of materials but return them when possible and opportune, i.e., a new institution is created in place), and post-custodial care is another.

The post-custodial approach could take many different forms. The archival community for example is discussing if one way of understanding this approach could be for materials to remain in their place of origin while external archivists provide management oversight: this represents a shift from the custodial tradition, where records are maintained by Archives and Collection (institutions), to an alternative model where records are retained by their creator with Archives providing oversight and support functions. Although post-custodial theory asserts that archivists can no longer hold custody of all records that might come under their care, nor does the theory suggest that custody will totally disappear.

Digital technology presents an interesting opportunity for participatory and post-custodial approaches that seek to shift curatorial authority and access to the communities represented. In this model, archivists and curators work side-by-side with community members to actively close gaps in historical coverage and proactively document the present day. At the same time, digitised material has the potential to reach (other) audiences beyond the physical space of a study room or library.

A prominent and by now famous institutional example of this approach is the University of Texas libraries who partnered with organisations in several countries to digitally document human rights struggles, the records of which are often extremely fragile and susceptible to loss. This work includes the Human Rights Documentation Initiative,[4] Genocide Archives Rwanda and the Digital Archive of the Guatemalan National Police Historical Archive.[5] Archivists in the USA and Canada are also collaborating with data scientists and many others to archive vulnerable government data related to climate change (the Environmental Data & Governance Initiative Archiving Data[6]) and other areas

2   In April 2021, the CCA formed an internal Land Acknowledgment Working Group. The group is made up of staff members from diverse backgrounds, though all identify as settlers or *arrivants*. The group has been studying the physical site of the CCA, its broader connections to land dispossession in what is now known as Montréal, as well as the CCA's institutional history, to better understand our position as a settler institution dedicated to researching architecture. Ultimately, the intent of this group is to facilitate the CCA's long journey toward fostering affirmative relationships with Indigenous peoples across Tiohtià:ke/ Mooniyang/Montréal.

3   "Centring Africa: Postcolonial Perspectives on Architecture," Canadian Centre for Architecture, accessed August 18, 2023, https://www.cca.qc.ca/en/61282/centring-africa-postcolonial-perspectives-on-architecture.
4   "About the HRDI," The University of Texas at Austin, accessed August 30, 2023, https://hrdi.lib.utexas.edu/hrdi/about.
5   "Digital Archive of the Guatemalan National Police Historical Archive," The University of Texas at Austin, accessed August 30, 2023, https://ahpn.lib.utexas.edu.
6   "Archiving Data," Environmental Data and Government Initiative, accessed August 30, 2023, https://envirodatagov.org/archiving.

of current political contention. And of course, there is the Europeana initiative to support and safeguard Ukrainian digital cultural heritage.[7]

Technology has democratised access in some ways, introducing a proliferation of open-access tools and participatory initiatives. The post-custodial model of archival practice is supported by digital technology in pursuit of a more collaborative approach to transnational archival work.[8] On the other hand, the digital divide is real. Online access does not necessarily mean improved access for everyone, nor should it be mistaken for digital preservation in and of itself. Moreover, there are significant ethical considerations: when we digitise collections, who is doing the labour? What about communities that do not want their information made publicly available? Careful consideration and engagement of these ethical issues is a crucial component of participatory archival practice.[9]

FIND AND TELL ELSEWHERE

With this in mind, we wanted to explore ways in which the CCA does not gain ownership to an archive but would increase access to material that would otherwise not be easily and globally accessible, to carry out and stimulate research, while at the same time apply our reparative description lessons learned. Digitisation is the tool to allow for access and further research, and we consider Wikimedia the principal platform for granting access, while the CCA website will play the role of a platform for editorial and curatorial narratives. The advantage of Wikimedia is that additional descriptions may be included in a language different from the standard used by the CCA, allowing other communities to study and write about this material. In other words, to place the material in the public domain, we feel that we take care of the material, but we shift from collecting (owning) to connecting — a post-custodial or rather non-custodial model.[10]

The CCA started a pilot project in 2022 by collaborating with the custodians of the papers of the Sudanese architect Abdel-Moneim Mustafa (1930) to examine his significant interventions in Khartoum and surroundings, and his role in the architecture of nation building in Sudan. Architecture historian Esra Akcan, who was a CCA research Fellow in 2019 was the initial liaison. The CCA's intention was to find ways to engage with this material, to make it visible and available for research rather than to acquire it, and at the same time to support local historians and researchers in sharing their work globally.

The custodians of the Mustafa papers, the office Technocon Engineering Consultancies in Khartoum, digitised a significant selection of the material in 2021 (around 40% of what is left of the Mustafa papers) and they have been documenting a selection of still existing buildings.[11] The selection of projects and material to be digitised has been a collaboration. Project descriptions, object descriptions, and a biography were provided by the team in Khartoum. In close collaboration with them we made this substantial body of digitised material, including the Arab Bank for Economic Development Headquarters (1980) and the Nifidi and Malik Mixed Use Developments in Khartoum, available on Wikimedia. The team in Khartoum also proposed to document the build projects, which led to a photo commission.

In doing this work we have become aware of what Christian Kelleher coined as 'conflicting desiderata'. Kelleher writes: 'American and European-derived archival standards, practices, and assumptions may be prescriptive and inflexible when confronting cultural circumstances and purposes different from those they were originally intended for. The rationales of the Global North and implications for the Global South of appraisal, acquisition, arrangement, and description of archives to Western standards, or providing access with Western freedoms in mind, need to be explicitly considered, or they may be implicitly adopted as a result of unequal power structures.' [12]

Having done the work on Critical Cataloguing and Reparative Descriptions prompted us to be mindful of setting the agenda together, leaving the decision for the selection of material with our collaborators in Khartoum and count on their expertise and be mindful of their timeline — rather than ours. An attitude that Michelle Caswell and Marika Cifor described as 'radical empathy'.[13]

In addition, we are in the process of creating a Wikipedia page which is an exercise in biased thinking. The biographical text is not accepted yet as it lacks citations according to the Wikipedia standards. Abdel-Moneim Mustafa may be one of the most important architects in Sudan, yet he is not recognised as such in the world of Wikipedia.

CONNECTING INSTEAD OF COLLECTING

Currently we are working on a second project in collaboration with Professor Warebi Brisibe.[14] Brisibe proposed to focus on the first generation of post-independence Nigerian architects like Michael Olutusen Onafowokan (the first President of the Nigerian Institute for Architects), Frank Nwobuora

7   "Statement of solidarity with Ukraine," Europeana, accessed 30 August, 2023, https://www.europeana.eu/en/statement-of-solidarity-with-ukraine.
8   Hannah Alpert-Abrams, "Post-custodial Archiving for Our Collective Good," CLIR News, accessed 30 August 2023, https://www.clir.org/2018/10/post-custodial-archiving.
9   Sofia Becerra-Licha, "Participatory and Post-Custodial Archives as Community Practice," Educause, accessed August 30, 2023, https://er.educause.edu/articles/2017/10/participatory-and-post-custodial-archives-as-community-practice.
10   "Non-custodial" practices — archival documentation in which an archival institution may have a stewardship role but not an ownership role — are not applied often, perhaps reflective of how closely tied archives are with custody, even in a post-custodial era. But are very interesting for the CCA to explore further given the conversations with Indigenous communities.

11   Sadly, due to the current conflict in Sudan the buildings have seen considerable damage. The digital documentation on Wikimedia is now the only resource left.
12   Kelleher, Christian. "Archives Without Archives: (Re)Locating and (Re)Defining the Archive Through Post-Custodial Praxis," in "Critical Archival Studies," eds. Michelle Caswell, Ricardo Punzalan, and T-Kay Sangwand. Special issue, *Journal of Critical Library and Information Studies* 1, no.2 (2017).
13   Michelle Caswell and Marika Cifor, "From Human Rights to Feminist Ethics: Radical Empathy in the Archives" in: *Archivaria*, The Journal of the Association of Canadian Archivists, Spring 2016.
14   Professor Brisibe is currently Acting Head of the Department of Architecture of River State University of Science and Technology in Lagos, Nigeria.

Mbanefo, Oluwole Olumuyiwa, Alex Ekwueme, Musa Waziri, Obong Victor Attah, and Olufemi Adetokunbo Majekodunmi. These architects and their contemporaries were responsible for many of the early post-colonial building projects in Nigeria during the 1960s and the oil-boom years of the 1970s. Their works have become major landmarks and national monuments in Nigeria. Brisibe and his team are collecting drawings from the estates of the architects, digitising, and describing the material. The CCA team will collaborate with them on the metadata structure and uploading digital files to Wikimedia. Together we will write texts for new Wikipedia pages. This effort will make the legacy of Nigeria's early independence architects known to a wider public, while the CCA will publish articles from local scholars on our website.

This approach signifies a different relationship between collecting, research, and programming. A growing network of scholars at CCA and elsewhere will gain from this project. For us it means positioning the institution as an agent in facilitating discovery and access to materials, while supporting different knowledge production within larger and diverse scholars' networks.

The future of archives is to connect rather than collect.

Social Media

Analysis of the most liked content of the world's 10 most followed Instagram accounts in 2022.

Javier Fernández Contreras and Paule Perron (HEAD – Genève (HES-SO))

Mediated Archives: The Interiors of Instagram and TikTok

"To raise the question of typology in architecture is to raise a question of the nature of the architectural work itself. To answer it means, for each generation, a redefinition of the essence of architecture and an explanation of all its attendant problems. This in turn requires the establishment of a theory, whose first question must be, what kind of object is a work of architecture? This question ultimately has to return to the concept of type."[1]

THE ARCHITECTURAL TYPES OF SOCIAL MEDIA

Few concepts more accurately reflect the ethos of dominant architectural discourse throughout history than that of "type". From Quatremère de Quincy's and Jean Nicolas Louis Durand's emphasis on tectonic and geometric elements in the 19th century to Le Corbusier's functionalist approach and the cultural and historicist perspectives of Giulio C. Argan, Aldo Rossi, and Alan Colquhoun in the 20th century, the understanding of type and typology in architecture has undergone significant changes in the last two centuries. With the emergence of mass communications, these concepts expanded to include mediated and multimedia spatial types, where mediums such as cinema or commercial catalogues created new patterns that informed the architectural ethos and, in particular, the design of interior spaces.[2] More recently, the emergence of social media platforms has created new types of space, further bolstered by users' identities and their ability to perform within this architecture.. The platforms' algorithmic structures create classifications based on their own hierarchisation, which constitute an archiving process in its own right.

This essay examines the interior spaces of social media, with a particular emphasis on Instagram and TikTok as two of the dominant platforms shaping both contemporary and future architectural archiving through the massive production, editing, and circulation of images and videos of interiors, and questions the role social media plays in the contemporary redefinition of our material environment and its blurred boundaries, namely how its representation directly affects our everyday material surroundings. It suggests that the immense quantity of data produced by social media about space and architecture, and the inner neoliberal platforms' structure that hierarchise and classify them, participate in the shaping of the architectural

1   Raphael Moneo, "On Typology," *Oppositions* 13 (Summer 1978): 23.
2   As explained by authors such as Beatriz Colomina and Penny Sparke.

discipline through an archiving[3] process that defines categories, or spatial types, of both analysis and conception.

ARCHIVING THE EVERYDAY

This study focused on the ten most followed accounts on Instagram and TikTok,[4] analysing all the posts of 2022 that represent interior spaces[5] without any officially stated commercial or professional purpose (e.g. partnership or brand tag). Following both Instagram and TikTok's primary initial aim, the research focused only on the *staged everyday life*, the alleged backstage of the professional lives of the account owners.[6] At stake is the very definition of architecture in the 21st century and the question of any linear association with its historical mediums, i.e., physicality since its inception, textual geometry in the classical era, printed plans and scale models since the Renaissance, photographic and multimedia image since the modern era, and software and digital realms in the internet era.

Both Instagram and TikTok's media characteristics suggest that all the information communicated on the platforms is shared by account owners. The apps have integrated the complete processes of photograph and video production into a single device, the smartphone.[7] Users are sold the idea of democratic access to the production and appreciation of these media cultures without any distinction. However, this supposedly inclusive immateriality has also made social media a powerful capitalist hub, which has developed its own social distinction processes.[8] Following a production/consumption structure, the apps create a hierarchy of the most successful type of content (based on algorithms, number of likes, most followed accounts, partnerships with brands, etc.), the most valued body types (still heterosexual, mostly American, white, and hyper-sexualised) and their material environment, all products of this immaterial market, infiltrating the homes of populations worldwide.

3   In this study, "archive" is defined as an evolving database that shapes the major heritage of an event through the categorization and classification of its documentation. Over the past few decades, digitisation has had a profound impact on the archival process in architecture and interiors. The history can be traced back to the 1990s, when Nicholas Olsberg (1996) first mentioned the challenges presented to archivists by digital architecture archives when records were in digital CAD (Computer-aided design) formats. In the same line, William Mitchell (1996) explained the volatility of storage media, which would create a tendency to retain everything in a disorganized way in digital environments, with software and hardware dependencies of CAD systems as significant obstacles to preservation efforts. Ann. R. Armstrong (2006) noticed that digitisation would bring about profound shifts in archival studies and education, signaling an end to the historical practices of physical archive preservation.
4   Visual analytics for Instagram conducted by Paule Perron; visual analytics for TikTok conducted by BA students in interior architecture Camille Bodin, Annie Bornet, and Taiana Broillet as part of the module "Theory of Mediated Spaces" (Prof. Javier Fernández Contreras, HEAD – Genève, spring semester 2023).
5   In this study, interior space is understood as follows: First, its material boundaries must be visible in the picture (walls, roofs, vegetation, pool, etc.). Second, either the point of view of the photograph or the main character in the picture (their body) must be within these boundaries. Finally, the place is not accessible freely and without distinction from beyond this boundary (for physical reasons, as well as economic or social ones).
6   The study was based on 300 posts total on TikTok and 370 posts on Instagram. They were all reviewed and analised visually.
7   Lev Manovich, "Subjects and Styles in Instagram Photography (Part 1)," in *Instagram and Contemporary Image* (self-pub., 2016), accessed March 10, 2023, http://manovich.net/content/04-projects/090-subjects-and-styles-in-instagram-photography-part-1/lm_instagram_article_part_1_final.pdf.
8   Pierre Bourdieu, *La Distinction: Critique sociale du jugement* (Paris: Éditions de Minuit, 1979), 150.

The shift in media culture created by social networks has produced its own spatial references and aesthetics, its own architectural types that stage the bodies of the account owners discussed herein, and in which domestic spaces play a critical role. Domestic spaces are not only where social media celebrities live their private lives, but the core of their public existence. Kim Kardashian (7th account on Instagram) is well known for the muted palette of her interiors, without any distinction between her home, her office, or the interior of her car or private plane. Charli D'Amelio (2nd account on TikTok) posts mainly dance videos in her home, on her porch, in front of the bathroom mirrors, or in her living room. These very well-documented homes are mediated as fragmented architectural types that all act as performing envelopes for the body. On the one hand, the defined area of the once bounded house has let both public and productive activities in, making it a hub of capitalist production with all the technical devices needed to create a domestic interior that enacts daily a performed and recorded routine. On the other hand, the documentation of these celebrities' everyday lives has exported these domestic activities outside the home. Their cars, private planes, or friends' houses are external domestic units that act as extended performing envelopes for their body, just like their homes.

From an iconographic perspective, we can define specific spatial figures, types of interiors that are enacted as such: the couch, the elevator, the hotel corridor, the bathroom, the dressing room, the private transportation means (car, plane, bus, or limo), the backstage of an event or show, the swimming pool, the hotel room, the training room, or the nightclub table are categories of spaces with their own codes that we find in all the top accounts of 2022. These spatial figures draw a contemporary landscape of interior architectures, strongly linked to domesticities, that are organised, classified, hierarchised, and therefore, archived through the internal structure of the app. It means that the construction of the progressive actualisation of our everyday material environment normativity is structured by private companies and their neoliberal organisation.

THE BODY, FIRST ARCHITECTURAL TYPE OF SOCIAL MEDIA

Our material environment is directly impacted by the evolution of the technologies, rhythms, and processes used to represent it. Paul Preciado showed the radical shift *Playboy* magazine produced in domestic spaces and interiorities in the middle of the 20th century through the simple but infinitely reproducible images of women's bodies in the Playboy Mansion.[9] Instagram and TikTok have further extended this access to staged intimacy and body representations and accelerated its distribution pace. The platforms' top accounts regularly display their owners' bodies as the main object of their posts Their representations are amplified and enacted by a variety of material devices that help to broadcast an extended definition

9   Paul Preciado, *Pornotopia: An Essay on Playboy's Architecture and Biopolitics*, 2nd ed. (New York: Zone Books, 2019), 30.

of their performed corporal identity. Cosmetic products, surgical implants, clothes, body prosthetics, sports machines, furniture, and interior spaces are the supporting characters in this theatrical everyday life, and all ten most followed people own at least one brand selling these products. Like Hugh Hefner before them, they have understood that, to build their own public persona, it appears necessary to develop the spatial conditions for this identity narrative, and they are shaping their own bodies as the primary space broadcasting this identity. The material equipment they advertise "make out of this body a fragment of imaginary spaces",[10] a place where utopias are crystalising, materialised within its flesh, with its own codes, hierarchies, and idealised models. Through their presence on various digital platforms, bodies become utopian spaces, infinite and distanced from their aging and imperfect living materiality, forming a unique architectural realm—a digital space supporting the construction of the public visual identity of its owner.

UTOPIAN INTIMACY

Within this context, one could talk of a domain of expanded domesticity, where celebrities are increasingly using domestic-like spaces on social media platforms to showcase their—supposedly—private lives through the staging of their body. The expression of this privacy is enacted within a series of isolated spaces, a territory of domestic islands. Extracted from archetypes of Western bourgeois homes of the 20th century, the couch from the living room or the bed from the bedroom are examples of devices displaying a normative, ideal conception of domestic life, an enduring utopia of late modernity.[11] The bed appears in both Instagram and TikTok accounts as a place of performed intimacy. Its recurring representation highlights ambiguity between a place of rest and hedonism, peacefulness and action, sleep and sexual activities, vulnerability and power, and is the location favoured by the Kardashian-Jenner family (3rd, 7th, 9th, 11th accounts on Instagram) to display their private lives. It also features in Cristiano Ronaldo's (1st account on Instagram) and Lionel Messi's (2nd) posts, providing a significant boost in the number of likes. Charli D'Amelio's (2nd on TikTok) most viewed video in 2022 on TikTok shows her laughing in bed in a hotel room with her best friend, allowing the spectator a glimpse into the most private sphere of the celebrity's life, providing the illusion of closeness and intimacy with them. The whole atmosphere of the bed (through lighting, the colour and texture of the sheets, the shape of the pillows or mattress) both defines and is defined by the body's visual characteristics—if the body is dark, then the bed may be white to emphasise it by contrast.

10   Michel Foucault, *Le Corps utopique/Les Hétérotopies* (Paris: Nouvelles Éditions Lignes, 2019), 15.
11   Hartmut Rosa, *Alienation and Acceleration: Towards a Critical Theory of Late-Modern Temporality*, (Copenhagen: NSU Press, 2010), 10.

Before the digital era, domestic types such as the bedroom were understood and conceptualised as places where private lives were lived behind the façade of buildings, where the most valued activities of normative Western domesticity were enacted, taking place within the room, the served space. Through social media, they have become places of publicly performed individuality and privacy. Although still separated from the physical public sphere by walls and doors, their bounded interiority is redefined through their broad public dissemination. The bed has become an architectural type of public domesticity, conceptualised as a prop for the hypersexualised heteronormative body.

INHABITING THE GLOBAL POCHÉ

Diving into the interior spaces of social media, the transformation of domestic spaces in the past ten years calls into question the shared understanding of their hierarchical relationships, and the way their neoliberal archiving shapes back architectural theory. Zones that for the past hundred years were identified as servant spaces are now the location of public performances. Places of domestic vulnerability spared by the public gaze, places of tending to multiple and imperfect corporeities are now displayed and enacted publicly.

Based on the specificities of their architectural program, the top accounts publicly explore and perform an expected and intimate vulnerability through the enactment of these spaces. The D'Amelio sisters (2nd and 16th accounts on TikTok), for example, also use their dressing rooms to showcase both their designer clothing and the transformation processes through which they become their public selves. Outside the scope of this research, recall the selfie bathroom at the 2017 Met Gala, starring three of the top ten account owners studied here. Away from the buzz of the most famous but invisible (or unphotographed) party of the year, the bathroom—once a place for the isolated transformation of the body in preparation for its public appearance—became a place of public visibility, offering to the public a glimpse of celebrities' seemingly non-official appearance and private lives behind the doors of their unsituated private spheres.

Ancillary spaces, traditionally unworthy of public attention, are now becoming the theater of social performance, staging corporeal vulnerabilities. The differentiation between servant and served spaces is blurred in social media platforms. The concept of "closed poché,"[12] which refers to the remaining spaces distinguishing the interior of a room from the exterior of a building, and "open poché," which describes the urban quality resulting from the interaction between interior and exterior spaces, can be applied to social media spaces through the notion of "a global poché." The careful inversion between what is experienced as serving spaces by most people, when displayed as served spaces for a few, creates repetitive and non-contextual domestic islands floating within an unlimited and undefined territory.

12   Jacques Lucan, "Généalogie du poché–de l'espace au vide," *Matière* 7 (February 2005): 45.

PERFORMING ARCHIVED DOMESTICITIES

Social media culture has blurred the boundaries between public and private, domestic and professional, daily environment and staged advertisement. It has created its own interiorities, language, and has structured its own architectural archive. As the identified types are reiterations of well-known spaces (previously understood as public or domestic), the spatial limitations and the interactions between these categories have profoundly changed. This article stresses the domestic transformations this shift in media culture is producing through the enactment of its inhabitants' bodies. To view these interiorities as a contemporary architectural archive is to recognize their role in shaping space and architecture while contributing to the evolution of the discipline through the inherent engagement of social media, thus generating normativity and spatial behaviors. It is not only to comprehend but to conceptualise domestic spaces, in order to thwart, through architectural action, the power relations they perpetuate. Through the repetition of these spaces' representations, the top account owners are codifying contemporary domesticity through the archiving of an extended territory made of fragments of interior typologies, infinitely reproductible and ready to be sold as the performative spaces of their utopian bodies.

This image is a Photoshop collage made in collaboration with Ebrar Eke(AI Architecture), inspired by Dr. Andrew Tallon's point cloud scan of Notre Dame Cathedral and its 3D representation in Assassin's Creed, using the MidJourney AI.

Meltem Yalçın Uysal (Independent Scholar)

Progressive Archiving: Strengthening Architectural Practice Through Digital Integration and Integrative Approaches

Architecture stands as a testament to human creativity and innovation, reflecting our cultural, societal, and historical tapestry in an ever-changing world. As architects continue to shape living spaces, it is imperative that their designs are firmly grounded in a deep understanding of history and context. This article explores the potential of *progressive archiving* as a transformative force that reconnects architectural design and practice with the rich fabric of history, as it flows through the realm of architectural archives.

Architectural archives serve as vital resources for documenting the history, construction, use, and preservation of buildings and complexes. They function as repositories preserving the historical, cultural, and aesthetic values inherent in these structures while also offering invaluable opportunities for learning and research by future generations.

This article will explore the complexities of progressive archiving and demonstrate its potential to bridge the gap between architectural heritage and contemporary design. Through a comprehensive examination informed by personal experiences in restoration and preservation projects, post-war reconstruction initiatives in Syria, and post-earthquake rehabilitation initiatives in Turkey, this paper provides light on the difficulties architects face when seeking historical insights to inform their designs and practises. The best time to capture knowledge about a building is immediately after it has been built and while it is in use and, significantly, before its decline towards demolition.[1] By delving into the specifics of these challenges, the article highlights the critical significance of accurate historical data in projects that seek not only functional excellence but also human experience enrichment.

When reflecting on personal experiences, it becomes evident how architectural archives gain significance. In 2018, during the topic of a master's thesis focused on the post-civil war reconstruction of Aleppo, challenges were faced in accessing historical data related to the city. It was during this process that personal archives emerged as invaluable assets. Notably, platforms

1   Jakob Beetz et al, Towards the long-term preservation of Building Information Models, Proceedings of the 30th CIB W78 International Conference – 9–12 October 2013, Beijing, China.

such as Archnet[2], an extensive, open-access library, played a pivotal role in providing researchers with insights into the city's past, facilitated by a wealth of photographs. This online resource's accessibility significantly simplified the process of accessing and analysing precise data.

In 2020, the restoration and reconstruction of a 400-year-old mansion[3] in Diyarbakır encountered a lack of resources. This historically significant example of Ottoman architecture, which had been neglected for years, presented significant challenges in acquiring historic information. Extensive efforts were made to gather facts, including reaching out to collectors and residents. However, when it became obvious that obtaining adequate information through these methods would be difficult, the project was forced to proceed by drawing parallels to architectural styles with similar characteristics. The municipal archives proved inadequate for such a significant historical structure, requiring an extensive review of the historical Ottoman archives. Ultimately, the project was completed on time with careful planning and using the appropriate resources.

Similarly, a devastating earthquake that struck ten provinces in Turkey in February, widespread destruction threatened the cultural identity of towns and villages. There were immediate efforts to initiate restoration and reconstruction. However, these efforts failed due to the absence of a standardised archiving system. Even after nearly seven months post-earthquake, substantial heritage buildings still await appropriate restoration.

These personal experiences, being part of project and research teams, have profoundly illuminated the crucial part that architectural archives play in integrating the past with the future and preserving architectural heritage for future generations. Therefore, it is essential to strengthen architectural archives via digital integration and integrated strategies. Digital technology enhances the accessibility and utility of architectural archives by making them available online and allowing for the easy transfer of data between different archives. Moreover, an integrative approach requires interdisciplinary collaboration. To ensure the preservation and maintenance of architectural archives, professionals from various fields, such as architecture, history, engineering, art history, and related fields, need to collaborate. Only through such collaborative efforts can architectural heritage be preserved for future generations.

Progressive archiving refers to a modern approach to archiving that combines traditional archival methods with digital technologies and integrative strategies to enhance the preservation and accessibility of historical architectural documents and data. This paper explores blockchain's potential for preserving historical documents and the transformative capabilities of augmented and virtual reality for architects. As open-source and collaborative tools

thrive, architects can now collectively contribute to architectural archive preservation. With interdisciplinary collaboration, progressive archiving becomes a unifying force, reflecting diverse societal aspects. In modern design, finding reliable historical data is challenging. The paper highlights architects' difficulties, especially in projects where historical enrichment is crucial. Cultural heritage will guide us through historical archives.

ADVANCING TRADITIONAL PRINCIPLES WITH DIGITAL SYNERGY

In recent years, the transformation of architectural archives has been unprecedented, motivated by a combination of traditional archival methodologies and modern digital technologies. This article's development section explores the inner workings of progressive archiving, revealing how this transformative approach changes the natural environment of architectural practise.

The digital age has created new challenges and opportunities for architectural archives. The rapid obsolescence and degradation of digital information makes it difficult to preserve and make architectural archives accessible. Evolving dynamics, shedding light on the significance of the integrated approach. [4] Progressive archiving is a new approach to archiving that addresses these challenges by integrating digital and traditional archival methods.

Digital integration is a key component of progressive archiving. It allows for the integration and management of architectural archives in the digital environment. This makes architectural archives more accessible and usable. Holistic approaches are also important for progressive archiving. They encourage cooperation among various stakeholders for the preservation and accessibility of architectural archives. This ensures that architectural archives are more comprehensive and accurate.

Progressive archiving is an effective way to strengthen architectural archives and make them a more valuable resource for architectural design and practice. It can help architects to better understand the history and context of their projects, and it can also help them to create more sustainable and resilient buildings.

BLOCKCHAIN:
THE GUARDIAN OF AUTHENTICITY AND TRANSPARENCY

Blockchain technology has the potential to transform progressive archives by providing a secure, transparent, and durable way to store and access data. Blockchain is a decentralised and secure database system that can ensure the permanent nature of records and increase transparency, making

2   See https://www.archnet.org/ Accessed September 1, 2023.
3   Şeyhoğlu Konağı is the one of oldest example of Diyarbakır traditional architecture which is adapted to a hot dry climate using local materials with unique architectural elements.

4   Ann R.E. Armstrong, Architectural Archives/Archiving Architecture: The Digital ERA, Art Documentation: Journal of the Art Libraries Society of North America, Fall 2006, Vol. 25, No. 2, 12–17.

it a promising tool for progressive archives that often contain sensitive or confidential information.

Blockchain technology can be used to verify the authenticity of architectural documents and documents, thereby preventing the increase of archival integrity threats that includes various risks to the accuracy and reliability of archival materials, including tampering, unauthorised access, or data loss. Furthermore, it enables the storage of architectural heritage information in a decentralised network, enhancing accessibility and resilience to natural disasters or other disruptions. As blockchain technology continues to evolve, we can anticipate even more innovative applications to address security, transparency, and durability challenges within progressive archives. The potential of blockchain technology to transform archives and records management by providing a secure and transparent data storage solution.[5]

As an example of the ARCHAIN Project[6] utilises blockchain technology to ensure data integrity and reliability in archival processes. Blockchain stands out as a fundamental component that securely records transactions related to the transfer of all documents to the archive. ARCHAIN's adoption of this technology relies on the unique strengths of blockchain, an online ledger protected through cryptography during data creation and storage. This system securely records each transaction, preserving the accuracy and integrity of documents while ensuring long-term trustworthiness and traceability. As a result, the transition of scientific and technical documentation into the archive becomes more secure and dependable.

STEPPING INTO HISTORY:
AUGMENTED AND VIRTUAL REALITIES

Recent developments in the field of architectural history have demonstrated the transformative power of digital technologies in providing new evidence, reimagining historical spaces, and enhancing our understanding of built heritage. The article next transitions to the domain of augmented reality (AR) and virtual reality (VR), which are technologies that allow architects to move beyond time and space. The examination of historical contexts is no longer restricted to old-fashioned archives; architects can now virtually enter the past. This section explores the transformative potential of augmented reality (AR) and virtual reality (VR), demonstrating how architects can explore the spatial dynamics of ancient structures, immerse themselves in historical narratives, and gain a deeper understanding of the fundamental connection between architecture and its historical context. Utilising techniques such as LiDAR, ground-penetrating radar, and 3D laser scanning, capturing precise architectural details, enriching progressive archive with invaluable evidence.

Creation of 3D models using methods like GPR, LiDAR, and photogrammetry enable the intellectual reconstruction of historical structures, breathing life into progressive archive of the past.[7]

The restoration of Notre Dame Cathedral is an example of how digital technologies can be used to preserve cultural heritage. The 2019 fire that severely damaged Notre Dame Cathedral in Paris, France, is a reminder of the importance of preserving architectural heritage. In the wake of the fire, experts from around the world have come together to restore the cathedral. One of the most innovative aspects of the restoration effort is the use of digital technologies. Ubisoft[8] created a digital model of the cathedral before the fire. This model provides a detailed representation of the cathedral's architecture and structure. [9] It is being used to understand the cathedral's original condition and to develop restoration plans Andrew J. Tallon[10] conducted a 3D scan of the cathedral.[11] This scan captured details that reflect the cathedral's historical and cultural significance. It is being used to preserve the cathedral's original details. The digital models and 3D scan data developed by Ubisoft and Tallon are a turning point in the restoration of Notre Dame Cathedral. These data are enabling restoration efforts to be carried out more quickly, efficiently, and accurately. Progressive archiving, which is the integration of traditional archival practices with modern digital technologies and integrative methods. It can be used to improve the accuracy, efficiency, and preservation of architectural heritage by making it more accessible to the public, preserving its historical and cultural significance, and helping restoration efforts to be carried out more quickly and efficiently. The restoration of Notre Dame Cathedral is a prime example of how digital technologies and existing digital archives can significantly expedite and inform the preservation of cultural heritage. Notre Dame's restoration was facilitated by a well-established digital archive of the cathedral's architecture and historical details, in contrast to the cases discussed earlier in this paper, in which references for the structures had to be carefully gathered due to the lack of pre-existing digital archives. The potential of digital archives to not only assist but also improve the preservation process is thus highlighted.

DEMOCRATISING ACCESS:
OPEN-SOURCE PLATFORMS AND COLLABORATIVE TOOLS

Architectural archives play a dual role by not only serving as repositories of historical records but also as invaluable sources of knowledge, guidance, and inspiration for future architectural endeavours.[12] This section discusses

5   Hrvoje Stancic, Anne Gilliland, Jesse McKee, Victoria Lemieux, How Blockchain Technology Transforming Archives and Records, Waiting For ICA Roma 2022, https://www.youtube.com/watch?v=M61I6BCJURo, Accessed September 1, 2023.
6   Albert Galiev et al, ARCHAIN: a Novel Blockchain Based Archival System, 2018 Second World Conference on Smart Trends in Systems, Security and Sustainability (WorldS4), 30–31 October 2018.

7   Caroline Bruzelius, Digital Technologies and New Evidence in Architectural History, Journal of the Society of Architectural Historians, Vol.. 76, No. 4 (DECEMBER 2017), 436–439.
8   French Game Developer
9   'Assassin's Creed' could be used to help rebuild Notre Dame cathedral, Accessed 01 September 2023, https://t.ly/hVdrk
10   Belgian Art Historian (12 March 1969 – 16 November 2018)
11   How One Man's Legacy Could Help Rebuild Notre-Dame Cathedral, Accessed 01 September 2023, https://t.ly/oM80F
12   Dr Arthur Barker, Ms Karlien van Niekerk and Mr Johan Swart, The importance of architectural archives, Department of Architecture, University of Pretoria (UP), 04 October 2016

how open-source platforms and collaborative research tools can be used to democratise access to these valuable resources. The advent of the digital era has facilitated a period characterised by enhanced accessibility and inclusivity within architectural archives. Open-source platforms and collaborative research tools have become influential facilitators, promoting the democratisation of the archive process. This component explores the ways in which these platforms enable a cooperative atmosphere, wherein architects, historians, and enthusiasts work together harmoniously. The collaborative effort not only enhances the calibre of data but also expands the range of historical viewpoints, guaranteeing a more comprehensive picture of architectural heritage. Taking cues from the digital archiving initiatives platforms like UPSpace[13] offer a means to democratise architectural materials, making them accessible to scholars and researchers across the globe.

INTERDISCIPLINARY COLLABORATION: CREATING INCLUSIVE ARCHIVES

Rethinking the archive[14] can help to make architectural archives more accessible, transparent, and reliable. It can also help to promote a more collaborative and inclusive approach to architectural research. For example, by bringing together architects, historians, archivists, and other stakeholders, we can create archives that are more comprehensive and accurate, and that are accessible to a wider range of people. Interdisciplinary collaboration is what forms the core of progressive archiving. This section emphasises the importance of incorporating diverse perspectives, including those of marginalised groups, in influencing the future of architectural archives. Progressive archiving eliminates the limitations of isolated viewpoints by promoting a multidisciplinary approach that draws on the knowledge of historians, sociologists, people in the community, and architects. The concept of participatory archives and inclusive archives can indeed be complementary. Both aim to make archival materials more accessible and involve a wider range of voices. Balancing inclusivity and expertise are a complex but necessary task in modern archival work. It's essential to recognise that the archive is not static; it evolves with societal changes and perspectives. The result is a more inclusive, detailed archive that reflects the complexity of architectural heritage and its relationships with society.

CONCLUSION

Progressive archiving signifies the more systematic and organised application of traditional archiving methods alongside modern digital technologies and integrated methods. This aims at better preserving, making accessible, and passing on the rich data from the past, especially in the field of architectural

archiving. It emphasises how digital technologies, interdisciplinary collaboration, and a more inclusive approach are integrated into archiving processes. This could potentially contribute to the more effective preservation and transmission of architectural heritage to future generations. This is possible because architectural records provide a wealth of historic, scientific, technical, aesthetic, social, and cultural information. This contribution to architectural archives enhances their value and utility. [15] By embracing digital integration, accessibility, and collaborative efforts, architects can easily progress towards a future in which architecture becomes a bridge between the past and the present, creating narratives that connect with the human experience all over time.

Progressive archiving serves as a bridge between the past and the present. Architects stand at an intersection where digital integration harmonises with tradition, preserving the essence of history while moving architectural practice forward. By incorporating blockchain technology, AR and VR experiences, open collaboration, and interdisciplinary interaction, architects are not only overcoming the challenges of gaining access to historical data, but also embarking on a journey of transformational. Overcoming challenges is that implementing technologies like AR, VR, and blockchain in progressive archiving can be challenging due to cost and resource constraints, the need for specialised technical expertise, concerns about data privacy and security, integration issues with existing systems, and potential resistance to change from traditional practices. This transformation contributes to the development of architectural heritage and generates designs which respect their roots. (a continuity in which innovation and tradition coexist in harmony).

Progressive archiving is a testament to the harmony of the past and the present, as well as the enduring influence of architecture on the human experience. Progressive archiving, by preserving and making architectural heritage accessible, ensures that the influence of historical architecture on the human experience endures. It implies that the architectural designs of the past have shaped how people interact with and experience their built environment, and by archiving and studying these designs, we can continue to learn from and be inspired by them in the present and future. In essence, progressive archiving helps maintain the connection between architecture and the human experience across time. Architects are currently engaging in a transformative process by maximising the potential of digital integration, adopting inclusive methodologies, and promoting collaborative initiatives. This journey enables them to overcome obstacles to historical data access while integrating their designs with a sense of the past. In doing so, architects become curators of both innovation and tradition, fostering the evolution of architectural heritage and contributing to a future in which the echoes of history are strongly reflected in the designs that define our world.

13   UPSpace is the Institutional Repository of the University of Pretoria and is defined as an open-access electronic archive collecting, preserving, and distributing digital research material donated to or created by the institution and its community members. (University of Pretoria, 2015)
14   Anatolios Stathiou, Rethinking the Archive; Memories for the Future, Nona Architecture, January 10, 2020.

15   Julie Collins, Future Histories – Archiving Digital Architectural Records, The Business of Architecture, Association of Consulting Architects Australia, 1 March 2023
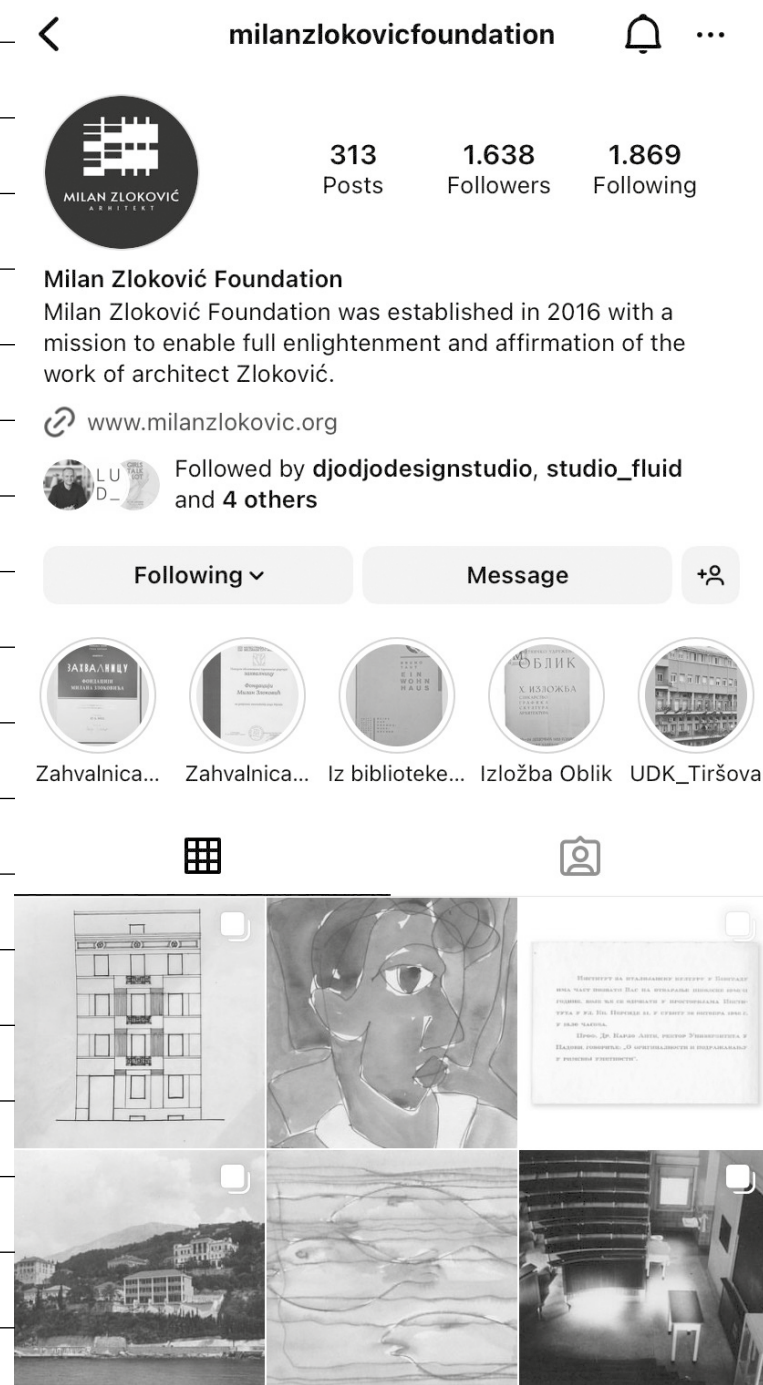
Mini-archive form in digitalised context: Instagram profile of Milan Zloković Foundation @milanzlokovicfoundation.

Jovana Tošić (Information Technology School – ITS Belgrade)

Continuity or Discontinuity of Architectural History: Digital Repositories and Social Media as Archives

BETWEEN INTUITIVE AND CONTROLLED: RESHAPING ARCHITECTURAL CRITICISM THROUGH DIGITAL ARCHIVES

Digital archives bring a new way of reading architectural history narratives and reshape architectural criticism through new research sources and tools. Digital repositories such as architectural design platforms—*Archdaily*, *Archilovers*, *Dezeen*, *Architectural Digest*, and social media networks—*Instagram*, *Pinterest*, and *TikTok* have become highly relevant documentary research sources. Users of digital archives cannot only explore but also comment, criticise, and popularise iconic architectural, historical, and/or contemporary projects. Thus, they influence architectural practice and its contemporary (and future) trends, simultaneously making themselves curators. Furthermore, this shapes a competitive atmosphere among architectural designers, whose projects seek to follow these trends which emerge from 'futurising' the past, thus taking historical architectural references and putting them into a future context.

Social media users and digital repository curators reconnect architectural design with architectural history by making innovative structures of architectural archives and thus interfere in reading architectural history narratives. Critical reading of these digital archive flows leads to the following questions: Is there a methodology for reconnecting architectural design practice with historical references through digital repositories, or is it an uncontrollable, intuitive, intertwined, and manifold connection? Is there a methodology for 'futurising' the architectural object from the past and curating it for the future, by giving it a new temporal context? Could these methodologies be proposed by transposing traditional archiving and curatorial practices into digital ones?

To explore the possibilities of formulating new methodologies for curating the future of architecture, the following discussion focuses on the entangled relation between traditional archives on one side (as fully controlled practices) and social media networks and digital repositories as innovative archiving practices (as partly controlled), on the other. Digital archives like social media networks have categorisation, which seems more intuitive because of their organically growing and classification over time with users' digital activities. Users on social media are archivists with an illusion of fluid and intuitive

research. In fact, there is also a top-down organising structure, but this force happens invisibly by less explicit forces of economic or social systems.

Further, selected social media users' comments on iconic architectural works were analysed in the context of 'futurising' these historical architectural objects by putting their contemporary context into new temporal contexts. In this way, social media networks and digital repositories have a large influence on reading architectural history narratives and reshaping architectural criticism. Applying traditional methods of archiving and curatorial practices to digital ones means acknowledging social media and digital repositories as new relevant research sources and tools. The question is how to make an order and give a shape to these new (digital) archive structures so as not to diminish the importance of architectural criticism and make it meaningless. This discussion aims to propose new guidelines for a methodology (or methodologies) of archiving architectural design through digital repositories and social media, thus influencing the curation of the future of architecture and the continuity of architectural history narrative.

BLURRED LINES:
ARCHIVING IN TRADITIONAL AND DIGITALISED CONTEXT

The traditional notion of the archive carries epithets such as—static, linear, physical, tangible, controlled, protective, centred, and arranged, in opposition to digital archives, which are—dynamic, non-linear, inclusive, flexible, intangible, fluid, decentred, and open-sourced. The ambiguity of the archive lies in its power to decide what is worth remembering and what is to be forgotten.[1] However, the digital archive's innovative structure is blurring the lines between memorised and forgotten parts of architectural history and deciding which segments of the past will be revived and sent directly into the future. In other words, traditional archives 'keep the past alive,'[2] but digital archives revive the architectural object from the past and 'futurise' it by putting it into a future timeframe and thus giving it a new temporal context.

In the traditional archiving system, there is a strict division between users and curators, whereas digital archives allow users to become curators and architects of archives. Consequently, users of social media and digital repositories don't have constraints in researching architectural history nor in influencing new ways of reading it. If 'the archive as the condition for our knowledge of history becomes dependent on the media of its transmission,'[3] then reading architectural history narratives also depends on the archive's transmission media. Digital archives influence writing architectural history

narratives by bringing archives, as architectural historian Beatriz Colomina named 'fragmented entities that hide in a private and "messy space".'[4]

Discussing the bond between experimental architectural design and archive, in his article *Unleashing the Archive* Wigley claims that the archive must be what is in front of architectural design, not behind, underlining that: "Work can only be experimental by both actively positioning itself relative to existing archives and through new archiving moves".[5] This could mean that besides constantly reading architectural history narrative, which is collected and classified in existing (traditional) archives, new archiving moves need to emerge for experimental design to be relevant in architectural design practice. In a digitalised context, these *new archiving moves* are already shaping new structures of digital archives, and this process is in part intuitive and partly controlled. Digital archive brought what Wigley named an 'experimental relationship to the archive.'[6] For example, digital archive brings innovative and complex archivist-user relation. Digital repositories of architectural design projects, such as *Archdaily* (architecture platform), *Archilovers* (networks of architects), *Dezeen*, and *Architectural Digest* (architectural magazines), differ from social media networks, such as Instagram, Facebook, Pinterest, and TikTok. Digital repositories' classification resembles traditional archives because they are top-down structured—architects themselves provide architectural design project documents. Furthermore, as project authors, architectural designers make key decisions about organisation of documents. Digital repositories make research guidelines by following category groups: Archdaily—by project category, architect, country/region, year, manufacturers, colour, Architectural Digest—by architecture, innovative design, celebrity style, AD100, Dezeen—by most popular and most recent architectural/interior stories, and Archilovers—by projects list, projects map, elements, materials and themes. To summarise, the digital repository classification criteria are mostly innovation and popularity. It means that, besides architects, users of these repositories also classify and take archivist roles. Several main parameters make an architectural project popular on social media networks: the number of likes, comments, and searches. This means that criteria for categorising architectural content on social media emerge organically over time. However, social media users are not just partly archivists but archivists indeed. Social media mechanism as a research tool may illustrate best why this innovative digital archiving process is non-linear, dynamic, and inclusive. For example, Instagram allows users to give a like, repost an image, a story, a reel, or any of the other users' comments on them, and thus to share and connect particular architectural design projects with some new reference, bringing a new way of reading its context, values, and meaning. In this way, digital archives, such as social media networks, get a crucial advantage over traditional ones—the essence of an archive is the place of potential discoveries.

1   Stamatis Zografos, "On Archives," in Architecture and Fire: a Psychoanalytic Approach to Conservation (London: UCL Press, 2019), 24.
2   Mark Wigley, "Unleashing the Archive," Future Anterior: Journal of Historic Preservation, History, Theory, and Criticism, Vol. 2, No. 2 (Winter 2005): 11.
3   David M. Berry, "Chapter Four. The Post-Archival Constellation: The Archive under the Technical Conditions of Computational Media," in *Memory in Motion: Archives, Technology and the Social*, eds. Ina Blom, Trond Lundemo and Eivind Røssaak (Amsterdam: Amsterdam University Press, 2016), 109.
4   Zografos, "On Archives," 28.
5   Wigley, "Unleashing the Archive," 12.
6   Wigley, "Unleashing the Archive," 12.

FUTURISING THE PAST:
SOCIAL MEDIA USERS AS ARCHIVISTS

As a new form of archive, social media has the power of creative information classification and innovative shaping of heterogeneously structured archives, thus opening up new directions for researching and reading architectural history narratives. In the following discussion, three examples of social media as new forms of archives are selected. The first one is an Instagram profile @ *milanzlokovicfoundation* — a historical architect's personal digital archive. The second one is the Instagram profile *@genex.tower*, an archive of one of the Belgrade's most famous landmark — *Genex Tower* (or *The West Gate*), and the third one is digital repository posts and social media user comments on the iconic architectural work of Spanish architect Ricardo Bofill — a new form of digital archiving moves as futurising the past.

Besides technical drawings of built and competition projects and photos of built houses, the *Instagram* profile of the *Milan Zloković Foundation*[7] reveals private artifacts of this significant Serbian modern architect.[8] It presents the architect's family photos, other artworks — such as watercolour portraits, personal invitations for cultural and academic events, photos of magazines he founded and edited, etc. This type of digital mini-archive is of great importance for architectural history research because it lights up the architect's sensibility and profile as an artist and architectural designer. It is a much more important approach than the linear research of a particular architectural work archive within an architect's architectural practice oeuvre. Through these historical artifacts presented in social media collage, the narrative of the architect's development and the process of shaping a personal, authorial approach to architectural design could be understood from the beginning, as well as his complex relation to modern architecture. Also, this illustrates futurising the past, an example of an iconic historical architect's profile in the contemporary context.

A mini-archive in the form of an Instagram profile could also be based on a single architectural object, like in the case of the *Genex Tower* — Belgrade's symbol of late modernism (brutalism).[9] Sources for this digital archive are carefully selected: articles of that period, scientific articles, television program shows and interviews, architectural history books, magazine articles with a critical approach, documentary movies, short *YouTube* informative videos, residents' and visitors' photos, etc. At first glance, this is just a social media profile of a single building, with its historical exterior and interior images and following texts as critical comments on its architectural characteristics, but it's much more. Much information and stories came from the building's residents and people who worked in the business tower.[10]

The photos and videos in this profile seem like the building has frozen in time. The impression comes from the decay of the business tower. Reading the history of a *Genex Tower* reveals multiple histories and their truths: the history of a resident, the history of a building, the history of a business company, the history of a society, and the history of a state. This digital archive collected information about a state's cultural, political, and social history and presented it through the architecture of a single city's landmark building. Although *Genex Tower* is a city's monument, to preserve it, Wigley's claim that 'to save something is to redesign it'[11] needs to be considered. It may be through the redesign of its archive, the intangible type of redesign. Creative new archiving moves consider that archives aren't just sites where documents on objects are protected, but rather to preserve means to make archives 'spaces of creative freedom and intervention.'[12]

The third case of social media analysis as a new form of digital archiving moves are posts and social media users' comments on the iconic architectural work of Spanish architect Ricardo Bofill. For example, the apartment complex — *La Muralla Roja* in Alicante and in Calpe, Spain, are trendy spots for photo shooting, and Instagrammable locations, primarily because of their dreamy form and colour. Because of their massive popularity on social media and various references to popular culture, the most comprehensive way to search for these iconic historical architectural works are by hashtags on Instagram, like #*lamurallaroja*, and look under *Top posts*. Several posts and social media users' comments stand out. Regarding popular culture, Instagram users mostly compare this complex form and atmosphere with the television series *Squid Game*, whereas *Architectural Digest*, on their *Instagram* post, compares it with *Dream House* from *Barbieland* because of its vibrant pink facade.[13] Through their comments, social media users become architectural critics and curators, while contemporary architectural designers are competing in following these newly globally popularised Instagrammable aesthetic trends.

DIGITAL ARCHIVES:
THE TASK OF CURATING THE FUTURE

To summarise, new guidelines for archiving architectural design through digital repositories and social media networks should follow dynamism and non-hierarchical processes of social media. To establish the continuity of reading architectural history narrative (with its multiple parallel histories), it is essential for the (digital) archive to be open and inclusive and to represent a platform for potential discoveries of forgotten (or hidden) architectural history fragments. In this potential new methodology of archiving through social media, the clear partition between archivist and user does not

7   Milan Zloković Foundation was established in 2016 as a private archive open for public with a mission to enable full enlightenment and affirmation of the work of architect Milan Zloković.
8   Milan Zloković Foundation (@milanzlokovicfoundation), https://www.instagram.com/milanzlokovicfoundation/.
9   Genex Tower (@genex.tower), https://www.instagram.com/genex.tower/.
10   There are two parts of a Genex Tower — a residential and a business tower.

11   Wigley, "Unleashing the Archive," 13.
12   Ines Weizman, "Architecture's Internal Exile: Experiments in Digital Documentation of Adolf Loos's Vienna Houses," Architectural Design 88 (May/June 2018): 39, https://doi.org/10.1002/ad.2298.
13   Architectural Digest (@archdigest), Instagram photo, September 30, 2023, https://www.instagram.com/p/CwiQr1ZxdAe/.

exist, flow of the information is highly dynamic and transformable, with unpredictable character. However, there are some key constants (like *popular posts* and *hashtags*) in which lies hidden organisation structures.

Complex and entangled new archiving moves and flows in the context of digital archives seem to originate from social media users' online activities and networking. But, analysis of the examples of social media profiles as new forms of digital mini-archives shows that guidelines for new archiving moves can be found in a manner of integrating the traditional archiving organisation into digital ones. Social media users become architectural history archivists and curators of the future of architecture, by reviving iconic architectural works from the past and translating them into the future context of architecture. To predict the directions of reconnecting the architectural design practice with architectural history through digital repositories and social media networks, the archiving practice must be able to accept dynamic changes of classification and heterogeneity of information and their references. This leads to new forms of digital mini-archives as social media collaged profiles with a critical approach to content selection and presentation.

0034 0035 0041 0044 0047
0060 0073 0077 0100 0114
0120 0122 0128 0129 0132
0133 0145 0151 0213 0248
0249 0279 0293 0296 0321
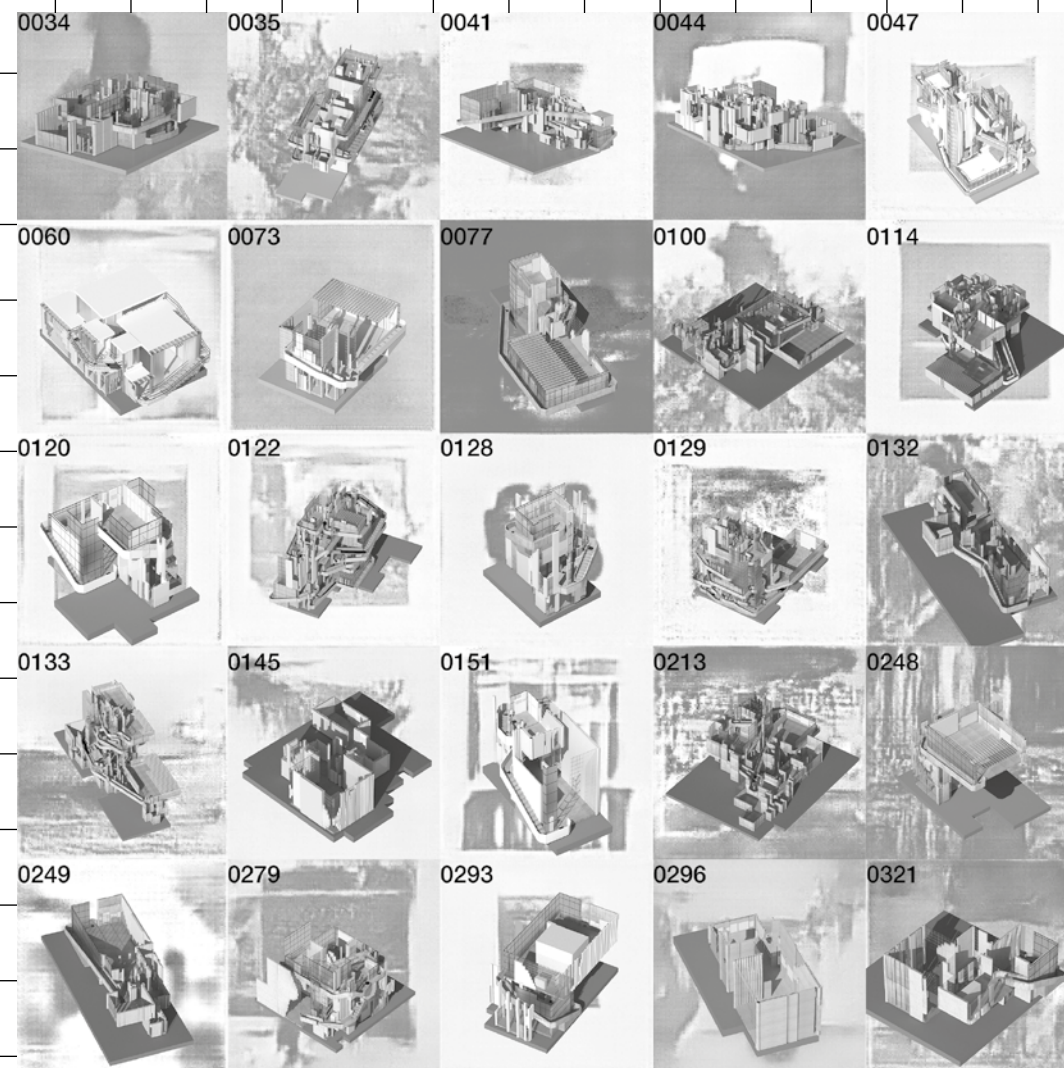
A selection of galleries.

Julian Besems (The Bartlett School of Architecture, ETH Zürich)

createGalleries.py:
An Abstract Formulation
of an Art Gallery in Venice

INTRODUCTION

Space in a digital context is not necessarily limited to the three physical dimensions we are bound to design within as architects. Digital spaces are represented by vectors of n-dimensions, and the similarities between them can be measured in numerous different ways depending on the nature of the data and the type of connections we want to study.[1] However, before we are able to represent anything as a vector, we have to establish a way of encoding this thing into its computational representation. A necessity but also potential that was already identified by Ada Lovelace through her insight for the potential of numerical encoding to offer another space to think in.[2] The primary objective throughout this project is to encode cultural and contextual entities in order to project these onto a geometrical domain of architectural formulations.

The project described here is primarily concerned with exploring how *recommender systems* can navigate the design space of built environments. The overall approach is centred around the idea of synthesis through fragmentation, where a new whole is arranged from the broken-down elements of the old entity through associations informed by machine learning methods, leading to the automated proposal of 1297 galleries in Venice with specifically assembled art collections based on the qualitative characteristics of photos taken around the sites of the galleries.

The concept of recommender systems, a technology that has transformed the way in which we can navigate cultural artefacts on digital platforms, formed the primary inspiration for the project. One way of understanding a recommender system is that it enables the user to compose a view onto this n-dimensional vector space from a particular point of view. In the case of the personal Spotify Discover Weekly playlist this view would be a list of songs from the overall environment, and the point of view is the listening behaviour of the specific user.[3] As such the recommender system

1   Common ways to finding similarities between data include Manhattan or Euclidean distances. When dealing with text data cosine similarity is often used. For a study on an improved cosine similarity measure that also discusses established methods in a comprehensive way see Murat Kirişci, 'New Cosine Similarity and Distance Measures for Fermatean Fuzzy Sets and TOPSIS Approach', Knowledge and Information Systems 65, No. 2 (1 February 2023): 855–68, https://doi.org/10.1007/s10115-022-01776-4.
2   Vera Bühlmann, 'Arché, Arcanum, and Articulation: The Universal and Its Characteristics', in Domesticating Symbols: Metalithikum. II, ed. Ludger Hovestadt and Vera Bühlmann, Applied Virtuality Book Series (Vienna: Ambra V, 2014), 112–76.
3   Kurt Jacobson et al., 'Music Personalization at Spotify', in Proceedings of the 10th ACM Conference on Recommender Systems, RecSys '16 (New York, NY, USA: Association for Computing Machinery, 2016), 373, https://doi.org/10.1145/2959100.2959120.

is not a technology that creates new things, instead it provides technics to communicate a constellation as perceived from a wide domain. An architectural counterpart to this might be seen in the perspective drawing technics introduced by Alberti during the renaissance.[4] This instrument did not serve as a means of creating new objects, however it did enable a new way of communicating the nature of 3D Euclidean space.

In the next three sections I will primarily elaborate on the technical implementation of this project before reflecting on its theoretical implications in the final section and conclusion.

READING A CITY ON DIGITAL TERMS

In dealing with a digital architecture which is recommended from digital artefacts, the primary context was chosen to be established from all photos posted on Flickr with coordinates in Venice.[5] This amounts to a collection of 192,747 images. These images do not have a geometry, and when taken as their coordinates, they do not belong to a specific geometry either. The only thing we know is a coordinate, not a 3D association with a building or object, these photos could be taken inside buildings, on the street, on the roof, or any other type of place imaginable. Therefore, it was decided not to determine their places and collection based on the known urban landscape to which the coordinates correspond but re-establish places in Venice purely based on the coordinate data and the biases that can be discerned within. As such internalising location within the digital away from the context. The reason for this was to not group areas by their established geographical definition, but instead discern a location as a place where the activity (based only on the coordinate information of flickr posts, not yet considering the images themselves) takes place without discernible bias. To this end a new recursive method of dividing location was developed. The principle is simple but results in a varied and nuanced distinction between places, which considers spatial nuances more effectively than other more established clustering methods such as *K-Means*, not in the least because of the open-ended number of locations contrary to the set *K* in other methods.[6]

Starting with a large rectangle, if the coordinates in the rectangle are uniformly distributed, it is determined as a location, as there is apparently no bias to the collection of points. If not, the rectangle is divided into squares, and the process repeated, until the smallest set threshold of space is reached, here 1x1m. Afterwards adjacent squares with similar density are joined into locations. This results in an irregular collection of 2706 locations determined by the distribution of Flickr photos.

CONTEXT AND ART

To connect the qualitative visual characteristics of this digital context — the Flickr photos in each location –to a physical dimension the combined collection of MoMA and TATE was gathered, amassing to a total of 130,178 art pieces.[7] This dataset contains images, names of art pieces, artists, and most essential for the physical projection: the dimensions of each exhibition piece. The 2706 locations and the Flickr photos contained in them were used for retraining the MobileNet model through transfer learning, using the collection of photos in each location as categories, leading to a model that is trained to discern the visual characteristics of each location.[8] The art pieces were divided over these locations based on the classification of the images into these locations by the retrained model. This resulted in 1297 different art collections that visually correlate to photos taken in the corresponding locations. Some locations remain empty, as no art piece was deemed to be associated to those locations.

The vectorised encoding of the images based on the visual features as encoded by the retrained ImageNet model not only allowed for pairing them with visually similar locations but also enabled the possibility of building an internal graph of the collection through the nearest neighbour's algorithm. This graph is used for the order and spatial division of the art configurations.

A graph as such offers too many possibilities and no clear anchor point. Therefore, a hierarchy needs to be established from a specific point. In order to avoid one art piece to stand above the others, art pieces were generated for each collection using a GAN trained on the entire art dataset.[9] These generated images serve to represent the overall character of the collection and stand at the root of a minimum spanning tree (MST) which determines the spatial structure of the gallery.[10] As such offering a vantage point from where the collection is navigated.

DEFINITION OF A GEOMETRIC DOMAIN

This tree structure, representing a sequence and division of art pieces, was divided into branches, forming sub collections. From these sub collections the dimensions of spaces are derived based on the sizes and type of the art. The total combined surface area is calculated based on these dimensions, and from this — given the project is situated in Venice with hardly any empty plots — the existing building with the most similar surface area

4 Miro Roman and Alice _ch3n81, Play Among Books: a Symposium on Architecture and Information Spelt in Atom-Letters, ed. Ludger Hovestadt and Vera Bühlmann (De Gruyter, 2021), 30–3.

5 For gathering the Flickr photos, the official Flickr API was used: Flickr, 'API Documentation', Flickr Services, The App Garden, accessed 1 September 2023, https://www.flickr.com/services/api/.

6 K-Means is a clustering method that divides a set of vectors into K clusters. It is based on the principle of minimising the internal distance of each cluster.

7 Open Data Robot, 'MoMA Collection – Automatic Monthly Update' (Zenodo, 1 November 2022), https://doi.org/10.5281/zenodo.7269353; TATE, 'The Tate Collection', GitHub Repository, 2020, https://github.com/tategallery/collection.

8 Andrew G. Howard et al., 'MobileNets: Efficient Convolutional Neural Networks for Mobile Vision Applications' (arXiv, 16 April 2017), https://doi.org/10.48550/arXiv.1704.04861.

9 Hendrik Vincent Koops, 'VPRO Guide GAN Covers', GitHub Repository, 2020, https://github.com/hvkoops/vpro-gids-gan-covers.

10 An MST is a subset of edges and nodes within a graph. The subset is such that it forms a tree data structure that connects all nodes with the lowest total distance.

within the location is chosen to be replaced by the gallery. This plot serves as a boundary for the configuration of spaces. The spaces derived from the tree structure are configured in a way that matches the tree structure and stays within the bounds of the plot. This set of resulting volumes then serves as a massing study of sorts, to which a set of geometries is fitted. This procedural process is defined through a set of algorithmic approaches coded in Python.

The first is that given any set of volumes a valid circulation system is calculated, ensuring that all spaces are accessible. The algorithm used for this is an adapted version of a visibility graph, extended to include connections with slopes that fall within restraints based on staircase regulations.[11]

From these volumes and circulation routes an inside and outside is determined which dictates the placement of walls and roofs. These are only placed around volumes where the bounds are on the outside, thus allowing for multiple spaces to be connected into irregular open areas, only divided by narrow walls to support art but otherwise allowing for internal circulation.

The final step is to introduce windows. For this the direct context is considered in order to frame views that visually correspond to the contents of the art collection. A 3D vector field is created within the bounding box of the gallery. The north, south, east and west views from the centre of the site are split into a grid of smaller images. The similarity of the views to the generated art piece determines the attraction of the centre point of that view onto the 3D vector field. If the vector at the coordinates of a block of wall forms an acute angle with that wall it is turned into a window, if not the wall block is rotated by the vector's angle to form a gradual opening of the walls towards the windows.

Together these algorithms establish a domain of geometric definitions of these galleries. Additional detail was added to the results by matching material palettes to the art collection based on visual similarity. These materials were then applied to the different types of resulting geometries.

PROJECTING ONTO THIS GEOMETRIC DOMAIN

If through algorithmic means we can construct a domain of geometric configurations, then how do we make images onto this domain in a way that relates to the architectural proportions we would like to address?[12] Using machine learning methods the projection from the domain to this geometric co-domain does not need to rely on linear functions anymore but instead follow contingent relations established through associations

of data. Removing the linear connection between domain and co-domain lifts the resulting architectonic connection out of geometry but onto a communication between non-commensurable fields. Thus needing to rely on finding proportionalities between the two domains instead of translating them into the same common set, similar to the proportion between plan and section. These domains in architecture are not the same, nor can they be reduced to one field, they need to stand orthogonal to each other to bear meaning. In this case the computational encoding of the 3D model allowed for a model of communication that mediates the two, here through linear Euclidean geometric projections. In the case of a domain of geometric definition and a domain of context and cultural entities, an orthogonality needs to be sought as well as a manner of communicating between the two, which in this project is established by a collection of machine learning methods, thus relying on contingent regression of connections over linear projections. Whether these methods are correct or not is a similar question as posing if a building is good or not.

CONCLUSION

When evaluating the outcome of these recommended galleries for particular locations, it is essential to recall the nature of a recommender system: it allows for a perspective on a defined domain. As such these different galleries are not so much 1297 distinct designs, but many different projections of a domain of galleries. The nature of this domain is constructed by the algorithmic design operations defined within the programmed manner in which these galleries are given shape. The elements are the types of geometries which get combined, and the operations on top of these elements are the definitions of how these geometries can be combined. This can be compared to that of group theory where the elements of a set are combined with an operation on these elements to form a group.[13]

Now when thinking about architecture in this way we open up a manner of how to think about the domains of buildings and contexts in more abstract ways which then can be engendered through computational means. The challenge is to avoid 'computerising' the architecture, and instead maintain the connection between the things which are vectorised and their original counterparts as an encoding but not appropriation, for then the qualitative aspect is lost.[14] Hence the plea for viewing these methods as new means of communication, and arguing against the idea that these technics generate new things themselves.

Similarly to the topic of *differentiae* by Hegel where the features of an observed thing, or *differentiae,* are essentially connected to the cognition which discerns them as well as the object which is observed, it is worth

11   A visibility graph is a method to find paths around visible obstacles on a Euclidean plane, often used within videogames or for robot movement. Here the plane was extended by connections that have a slope, but the principal method remains the same.
12   Here image is considered in the mathematical sense where an image of a function means the collection of possible outcomes within the co-domain of the function.

13   A simple example of a group is the set of the whole numbers with the operation of addition.
14   Ludger Hovestadt, Beyond the Grid – Architecture and Information Technology: Applications of Digital Architecture = Beyond the Grid – Architecture and Information Technology (Basel Berlin: Birkhäuser, 2010), 18.

noting that the features of things encoded in vectors are as much a characteristic of the model that is used for the encoding as of the thing which is encoded.[15] The creation of new architectonic abstractions will still have to be done through interactions and finding proportions between the domains within which we communicate. However these might not be purely constrained to the Euclidean geometries we have been dealing with in terms of computational models of architecture.

The algorithmic approach is able to define a structure of a domain of geometric definitions but without adequate ways of navigating these, and revealing constellations of this domain they remain blocks of geometry. The interest in navigating in these domains is to attempt at discerning constellation from the domain of geometric possibilities.

15   G. W. F. Hegel, Phenomenology of Spirit: 569, trans. A. V. Miller, Revised ed. edition (Oxford: Oxford University Press, U.S.A., 1976), 149.
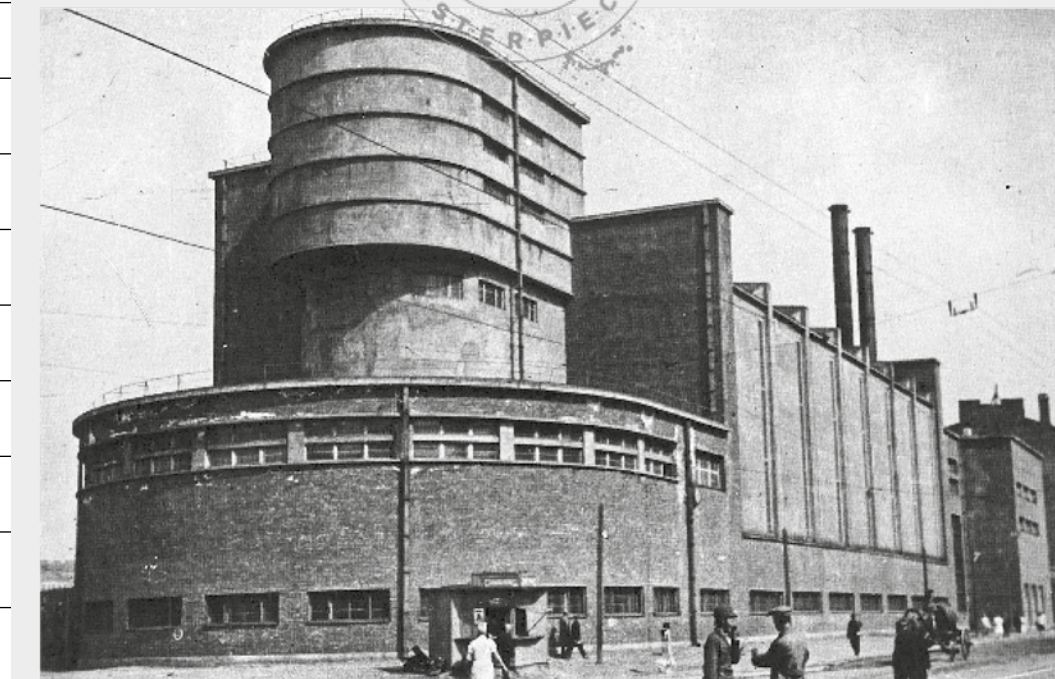
Forgotten Masterpieces – FOMA

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A Living Open Architecture Archive: Lessons from Docomomo and Architectuul Collaboration, Challenges and Potentials

INTRODUCTION

In an era of rapid architectural evolution, the preservation of architectural heritage, particularly that of the Modern Movement, stands as a paramount challenge. This contribution aims to showcase the collaboration between Architectuul, an open data architecture community, and Docomomo International, a global non-profit organisation dedicated to the documentation and conservation of buildings, sites and neighbourhoods of the Modern Movement, which is present with national working parties in 79 countries.[1] Since 1990, Docomomo International has been collecting, researching, and documenting information of over a thousand Modern Movement buildings in systematic 'building fiches', part of which have been published in the Docomomo Journal, biannual international conference proceedings, and several book publications in English and other languages.[2] Consequently, Docomomo has established itself nationally and internationally as a point of reference and partner for organisations like ICOMOS, UIA or the Getty Conservation Institute. Nevertheless, only a fraction of this rich material is readily accessible in digital form, and over the years, Docomomo has recognised the critical and challenging task of building a sustainable, continually updated, cost-efficient, and openly accessible archive to disseminate this architectural knowledge further across geographies and cultures, beyond the printed versions and local digital repositories.

Architectuul, launched in 2010,[3] has aimed to devise innovative solutions to the archival dilemma. It began as an open data community project based on the premise of sharing knowledge of buildings and its creators online under a Creative Commons license. Originally created as a crowd-sourced community by a team of architecture enthusiasts, architects, graphic

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1   Docomomo International. Accessed September 19, 2023, https://docomomo.com/.
2   Docomomo Journal, Conference Proceedings, Dossiers ICS/T, Books, and Digital Archives can be viewed at, https://docomomo.com/. In 2000, Dennis Sharp and Catherine Cooke compiled the 'Black Book' on Modern Movement Architecture, which includes around 800 entries sourced from the fiches within the Docomomo International Register. Dennis Sharp, and Catherine Cooke, *The Modern Movement in Architecture: Selections from the Docomomo Registers* (Rotterdam: 010 Publishers, 2000).
3   "About", Architectuul (last updated August 4, 2023). Accessed September 26, 2023, https://architectuul.com/about.

designers and software engineers, its archive covers buildings throughout history, from archetypal classics to contemporary projects. All content is sourced by the Architectuul community and curated by a dedicated editorial team. Over time, Architectuul has developed into a leading open data architecture archive.[4] As a testament to its usefulness for the dissemination of architectural knowledge, Architectuul frequently receives external requests for material usage, attracting renowned institutions like the Canadian Centre for Architecture (CCA), Domus publisher, and the Institute of Contemporary Arts (ICA) in London. Thanks to the Architectuul license policy these requests can be granted free of charge.

PREMISES AND OBJECTIVES OF THE COLLABORATION

The collaborative initiative of Architectuul and Docomomo began with a pledge—an agreement to perpetually offer architectural content freely and openly. Beneath this commitment lies a multitude of questions and challenges. How can an 'Open Architecture Archive' be created and maintained, and what does "open" signify in this context? Who bears the responsibility for the content within the archive, and under what licensing agreements can this knowledge be shared? How can the archive foster vibrant user interactions among professionals and enthusiasts, and, critically, how can it be sustained, updated, and kept relevant?

To explore and critically research these issues, Architectuul together with Docomomo Germany (as national working party of Docomomo International), Contineo 2020 (the North Macedonian NGO for the preservation of Modernist architecture in Skopje), and Kaunas 2022 (the European Capital of Culture program of the city of Kaunas), launched the project 'Forgotten Masterpieces (FOMA)—a living open archive for European Modern Architecture in a joint effort, co-funded by the European Education and Culture Executive Agency (EACEA).[5] It leveraged institutional expertise and cross-cultural connections to curate a digital database. Ultimately, it generated two new open online archives (one for Docomomo[6] and one for North Macedonia[7]) facilitated by the Architectuul platform and interlinked through an API infrastructure–a dynamic hub for the exchange of architectural knowledge.

This paper presents the collaboration of Architectuul and Docomomo to shed a limelight on the creation and maintenance of open digital architectural archives. It derives insights from the collaborative experience, highlighting the challenges encountered and lessons learned. The

partnership featured a fellowship program designed to educate and foster idea exchange among young heritage professionals, ultimately laying the groundwork for the forthcoming open archive. Navigating the intricacies of digital documentation and knowledge sharing, this endeavour demonstrates that these initiatives go beyond mere preservation of the past, inspiring innovative approaches for broader engagement and contribution within the architectural community. This exploration delves into the notion of 'open' within the digital archives for architectural knowledge.

THE FORGOTTEN MASTERPIECES (FOMA) FELLOWSHIP PROGRAM

The Forgotten Masterpieces (FOMA) Fellowship Program, a six-month immersive experience for young academics and professionals, focused on re-discovering Modern Movement architecture and archives through digital means while reviving the quest for forgotten treasures of twentieth-century architecture in Europe, while forming an integral component of the collaborative efforts between Docomomo and Architectuul. The program aimed to explore and experiment with the digital transformation in documenting architecture, and novel strategies of knowledge generation and dissemination. It leveraged rich cross-cultural connections in collaboration with the participants and scholarly expertise of different and very diverse institutions. Fellows contributed to the development of written and visual material through scientific writing, photography, representations, and digital publishing, providing inputs for creating a digitised database. The program culminated by establishing two open online archives, facilitated by the Architectuul platform, promoting a digitally-supported, collaborative exchange of architectural knowledge.

The methodology of the fellowship program entailed a two-fold approach. The initial stage involved digital data collection, verification, and the creation of comprehensive written and visual materials for archive entries.[8] The collected data, consisting of texts, drawings, and photographs, posed the main challenge of identifying reliable sources and utilising copyright-free materials. Subsequently, the materials were formatted and organised within a collective database among the fellows, ensuring a streamlined transfer to the Architectuul platform. Through the process, further visualisation and dissemination techniques were explored, mainly by the use of mapping, utilising the archive database. Following the completion of the transition and the establishment of the curated archives online, the fellows worked on refining individual building 'articles' on the Architectuul platform, addressing minor issues arising from technical errors. The second stage of the program comprised of a hybrid discussion and dissemination of results organised as a 24-hour Hackathon[9] that brought together participants and mentors from

4   "Architectuul", Wikipedia (last updated July 5, 2020). Accessed September 26, 2023, https://en.wikipedia.org/wiki/Architectuul.
5   The project with Docomomo Germany, https://docomomo.de/; Contineo 2020, https://contineo.mk/; Kaunas 2022, https://kaunas2022.eu/en/ was funded by EACEA under the project number: 101056402.
6   See the Docomomo collection on Architectuul, "Docomomo Modern Architecture Archive". Accessed September 26, 2023, https://docomomo.architectuul.com/.
7   See the North Macedonia collection on Architectuul, "North Macedonia Modern Architecture Archive". Accessed September 26, 2023, https://northmacedonia.architectuul.com/.

8   The Docomomo Germany fellows relied on the "Das Neue Frankfurt" map by the Ernst-May-Gesellschaft (http://karte.ernst-may-gesellschaft.de/) and Docomomo 'Documentation Fiches' as their principal sources, complemented by supplementary information and updates sourced from university databases, archival documents, and scholarly publications.
9   "Forgotten Masterpieces Cultural Hackathon–LINA" (last updated 15 April 2023). Accessed September 26,

various locations worldwide in a collaborative environment. The Hackathon, conducted partly online and partly in-person, encouraged participants to explore emerging issues and themes that arose during the archival process.[10] By fostering dialogue among participants, as well as engaging online audiences and experts, this methodology addressed the challenges and implications surrounding architectural archives, including issues of data accessibility, authorship, and copyright while emphasising the need for transparent and collaborative platforms.

In conclusion, the FOMA fellowship program,[11] in conjunction with the Architectuul platform, represents a forward-thinking initiative to expand the open online archives for architecture communication. By nurturing the collaborative digitisation of architectural data and ways of knowledge sharing, this project has encouraged cooperation and dialogue among young professionals and experts within the architectural community. The project outcomes invite critical reflections on archival practices,[12] while also inspiring innovative approaches for broader engagement and contribution.

EXPLORING OPEN DIGITAL ARCHIVES FOR ARCHITECTURAL KNOWLEDGE

One major output of the FOMA fellowship was the exploration of 'open archives' and its benefits and drawbacks. What is an open archive? Documentation involves the systematic collection and organisation of information pertaining to a work, encompassing its condition, content, context, and the preservation measures undertaken. In conservation practices, it is an essential tool for reconstruction and preservation purposes.[13] Likewise, documentation and inventory building are pivotal in architectural knowledge generation. They serve as vital tools for capturing, organising, and preserving architectural information, including designs, structures, materials, and techniques. Open architecture archives provide

a dynamic platform for enthusiasts, professionals, and scholars to access, contribute, and share architectural content freely. These living repositories evolve with the field, promoting engagement and the ongoing relevance of architectural knowledge.

Expanding on the notion of an 'open archive' within the context of architecture, it's essential to clarify 'openness'. Beyond financial freedom, 'openness' in architectural archives encompasses principles of universal accessibility, unrestricted sharing and collaborative knowledge exchange, and ultimately the application of open licenses. This definition draws inspiration from pioneers in open-source and open-access movements, such as Richard Stallman (Free Software Foundation), Linus Torvalds (Linux), Bruce Perens and Eric S. Raymond (Open Software Initiative), and legal scholars like Lawrence Lessig (Creative Commons).

However, this raises a fundamental question: Who owns the archive? Unlike traditional archives governed by well-established legal frameworks, open architecture archives often challenge conventional ownership boundaries — a repository of collective architectural knowledge that is owned by the architectural community as a whole. This notion reflects the democratic and collaborative ethos of open-source and open-access movements, revolutionising how architectural knowledge is perceived and shared.

On an alternative perspective, collectors are categorised by their choice of collection items and their perspective on the relationships between items in their collection, with some favouring similarity and others embracing diversity. In fields like architecture, where collected artifacts may differ significantly from the final product, this distinction is significant.[14] This also underscores the importance of recognising the diverse target audiences, making it crucial to distinguish between scholarly-focused archives and community-driven platforms.

COMPARING DOCOMOMO AND ARCHITECTUUL APPROACHES

Docomomo archives showcase 20th-century modern architecture, providing academic scrutiny and curation, while acknowledging expert perspectives and recognition. Whereas, Architectuul functions as a community-supported/-driven platform, relying on open-source materials. Even so, both archives hold value for both specialists and the general public. Their hierarchical layouts provide a level of control over the depth of information presented.

Docomomo focuses on documentation and conservation of 20th century architecture, specifically from the Modern Movement, and operates through a network of National Working Parties (NPWs) worldwide, allowing for localised expertise and regional-specific documentation. They use standardised formats, known as 'Documentation Fiches' for data collection

2023, https://lina.community/programme/event/36/forgotten-masterpieces-cultural-hackathon/.

10   The Hackathon consisted of various sessions in which a 'digital champion' (fellow) was paired with an external mentor to address specific digitisation concerns related to Forgotten Masterpieces. This included efforts to enhance data verification, improve keyword search functionality, and refine methods for defining architectural characteristics. Additionally, the program sparked discussions on the subjects of continuity, promotion, AI-tools, protection-transformation barometer, all of which deserve further attention in archive building. See "FOMA: Cultural Hackathon", Architectuul (last updated 26 April 2023). Accessed September 19, 2023, https://architectuul.com/digest/foma-cultural-hackathon.

11   See the Lithuanian fellows who worked on an archive for Modern Architecture in Kaunas, "FOMA — virtual archive — Modernism for the Future | Kaunas 2022". Accessed September 26, 2023, https://modernizmasateiciai.lt/en/virtual-archive/.

12   The Docomomo Germany fellows also authored concise essays regarding digital documentation and publishing within the context of the Modern Movement, sharing their reflections and further exploring the questions raised during the FOMA experience. They highlighted themes like mapping the archive, employing AI-tools and ChatGPT to enhance documentation, and addressing issues related to reproduction and Creative Commons licensing. These essays will be published by TH-OWL: Uta Pottgiesser, Anica Dragutinovic, and OWL University of Applied Sciences, eds. *MoMove Modern Movement and Digital Archives*. Presented at the 20th Docomomo Germany Conference. Lemgo: Technische Hochschule Ostwestfalen-Lippe, 2023.

13   Annet Dekker, "Methodologies of Multimedial Documentation and Archiving." in *Preserving and Exhibiting Media Art: Challenges and Perspectives*, eds. Julia Noordegraaf„ Cosetta G. Saba, Barbara Le Maître, and Vinzenz Hediger, (Amsterdam University Press, 2013), 149–95. http://www.jstor.org/stable/j.ctt6wp6f3.12.

14   Matt Roam, "You Are How You Collect", *Perspecta* 48 (2015): 161–69. http://www.jstor.org/stable/45215807.

to maintain consistency in recording architectural information.[15] This structured outline is particularly suitable for a digital archive, as it enables various categorisations and filtering options for the collected information. In 2015, Docomomo International has adapted to the fast-paced digital landscape and globalisation by expanding its role as an international platform, offering new online channels for dissemination and knowledge exchange, and creating the Docomomo Virtual Exhibition (MoMove). This initiative aimed to consolidate the information collected by the NWPs, unifying the dispersed archives for cohesive online presentation and dissemination.

In contrast, Architectuul has a broader scope, covering various architectural styles and historical periods, and serves as an open data project promoting the free sharing of architectural content online. It encourages community contributions and user engagement, allowing users to add, curate, and freely access architectural information. While it prioritises architectural documentation, it also fosters a community of architecture enthusiasts for knowledge sharing and discussions.

In today's expansive contemporary digital archives, emphasising their distinct aesthetic character is crucial. This uniqueness changes how individuals interact with information and underscores the importance of well-designed access and organisational systems, preventing it from becoming a generic evidence repository.[16] Numerous scholarly initiatives are exploring the use of digital tools for sharing research findings and improving audience engagement.[17] Leveraging contemporary digital visualisation and communication technologies, including websites, apps, films, and immersive experiences like 360-degree images, virtual reality, and gamification, these efforts experiment innovative means to protect and celebrate recent architectural heritage.[18]

Both initiatives, Docomomo and Architectuul, share a commitment to open archives in architecture, emphasising accessibility and openness in architectural documentation, but they differ in their specific focus, organisational structure, and community engagement approach. Maintaining an open architecture archive involves multiple facets, encompassing technical infrastructure, content management, quality assurance, backup strategies, and user support. Contributors, curators, moderators, and platform providers share responsibility for the archive's content, typically

under open licenses like Creative Commons, enabling sharing, reuse, and adaptation. Engagement is encouraged and stimulated through community forums, user-generated content, and interactive features. Ensuring the archive's long-term sustainability requires active dissemination through various channels, regular updates, collaborative maintenance, and a commitment to improved archival practices, all collectively contributing to the ongoing relevance and vitality.

CONCLUSION

In the next phase of their collaboration, Architectuul and Docomomo International are embarking on an ambitious journey to further implement the 'Open Architecture Archive'. This transformative initiative aims to shift 32 years of documentation, including fiches, photographs, and articles, by translating them into the digital era as Registers 4.0. To achieve this and explore the possibilities, AI-tools may play a pivotal role, automating content tagging, offering content recommendations, and enhancing quality control. Through content analysis and tagging, AI simplifies categorisation and facilitates searches within the archive. Moreover, it provides users with relevant content suggestions based on their interests and search history, encouraging exploration and broadening the archive's audience reach. Additionally, AI can assist in maintaining content quality by identifying errors, inconsistencies, or missing information, thus ensuring the accuracy and reliability of archive materials.

This evolution prompts critical questions: will it mark a paradigm shift for organisations like Docomomo, transitioning from 'expert documentation' to 'open crowd documentation'? Furthermore, the challenge of migrating the existing data, which includes partly proprietary Docomomo archives like the NWPs, into the Open Archive will undoubtedly be an essential aspect of this ambitious journey. It will inevitably raise questions regarding ownership rights within distinct national or regional initiatives, and individual efforts.

15   Docomomo International formulated two distinct formats: the "Minimum Documentation Fiche" and the "Maximum" or "Full Documentation Fiche". Both contain similar sections tailored for the digital archive, with the latter offering more comprehensive details. The shared outline in both fiches helps structure the information collected, covering aspects such as the identity of the building/group of buildings/urban scheme/landscape/garden, history of the building, description, evaluation, and documentation. The fiche report at the end acknowledges the reporter's contribution.

16   Sylvia Lavin. "Today We Collect Everything." *Perspecta* 48 (2015): 182–91. http://www.jstor.org/stable/45215809.

17   Uta Pottgiesser, Anica Dragutinovic, Marzia Loddo, and OWL University of Applied Sciences, eds. *MoMove Modern Movement and Infrastructure*. Lemgo: Technische Hochschule Ostwestfalen-Lippe, 2021. https://doi.org/10.25644/3m9j-0f94.

18   Uta Pottgiesser, Anica Dragutinovic, and OWL University of Applied Sciences, eds. *MoMove Modern Movement and Industrial Heritage*. Lemgo: Technische Hochschule Ostwestfalen-Lippe, 2022. https://doi.org/10.25644/4d3d-2v96.

Martynas Plepys for 'Ekskursas', 'Institute of Industrial Planning and Construction', Kaunas, 2016.

Algimantas Grigas (Kaunas University of Technology)

Ghost Archives of Socialist Modernism in Lithuania: Unsolicited Accounting of Centralised Planning Institutes' Project Documentation

The archives of centralised planning institutes are fundamental in order to fully measure the legacy of the architectural production in Soviet occupied Lithuania between 1945 and 1990. These archives contain crucial information about the essence of architectural practice: design decisions, the level of craftsmanship, relevance in meeting society's needs and the supervision structure of the authors. It is important to stress that Socialist Modernist architecture was created under a constant exchange with peer architects and would usually be validated at the internal, critical Architectural Councils. There is a need to safeguard all documentation containing early, preliminary and technical implementation project design phases, so that the full network of authors and registration of the external impact and improvements can be identified. Maintaining an accessible architectural design archive, from materials produced at all centralised planning institutes, would contribute to the open culture and on-going research of architectural history in Lithuania. This article describes and applies criticism to the uncontrolled diminution and dispersion of architectural archives in Lithuania during the Soviet-era. Apart from total deletion, what are the errors made when dealing with the so-called ghost archives? An analysis of such phenomenon is expected to result in proposals for strategies that would encapsulate the future infinite semiosis of the Socialist Modernist architecture inheritance.

BACKGROUND

From 1945 to 1990, the repressive Soviet occupation of Central and Eastern European countries, including the three Baltic States, imposed a political propaganda that directly shaped the production of a new physical environment. The common historiography of Socialist Modernist architecture in the Baltics has been thoroughly recounted in monographs by several architectural historians.[1] While Estonia and Latvia have their national

1   Vaidas Petrulis, Marija Drėmaitė, and Juratė Tutlytė, eds., *Architektūra Sovietinėje Lietuvoje* [Architecture in the Soviet Lithuania], (Vilnius: Vilniaus dailės akademijos leidykla, 2012); Marija Drėmaitė, *Baltic Modernism: Architecture and Housing in Soviet Lithuania*, Basics 56 (Berlin: DOM publishers, 2017); Mart Kalm, *Eesti 20.sajandi arhitektuur* [Estonian Architecture of XX Century], (Tallinn: Eesti Kunstiakadeemia, 2001); Ritter Katahrina, Steiner Dietmar et al, *Soviet Modernism 1955–1991: Unknown History*, (Zürich, Park Books, 2012);

Museums of Architecture, Lithuania has lost its physically represented Museum of Architecture (1968–2006). After its closure, the late director Morta Baužienė recounted: 'The National Museum took over a collection of 55,500 architectural items. Later however, and without the approval of the National Museum, it turned out that about 20,000 items were transferred to the Vilnius Regional State Archives.'[2] Upon closure, the museum's collection, with a rich and large number of Socialist Modernist architecture models and design boards, was dispersed through various state institutions and private stakeholders; all of which do not necessarily engage with active dissemination of documentation. Baužienė explained that '(…) the job of architectural historians was made a lot more difficult. Lithuania was left without an institution capable of making a serious architectural exhibition (…)'.[3] Today one of the leading agents in forming architectural culture in Lithuania is the 'Architecture Fund', but they do not have an adequate physical representation space.[4] a number of virtual attempts to replace the Museum of Architecture co-exist in Lithuania, but they lack measurable impact in real life, long term planning, and commitment to a continuous curatorial strategy.[5] Since the beginning of 2023, and with the support of the architectural community, the Lithuanian Minister of Culture is trying to establish a 'Centre of Architecture' at the now unused main Post Office (F. Vizbaras, 1931) in Kaunas. While history is in the making, the personal archives of architects are in flux as well.[6] Also, following Russia's attack on Ukraine, the archives of Lithuanian Socialist Modernism or anything related to the troublesome Soviet period are deemed increasingly redundant.[7]

A TOUR GUIDE OR A STALKER

In the late autumn of 2016, an informal initiative 'Ekskursas' — specialising in public architectural tours — announced an exclusive visit to the building of the 'Institute of Industrial Planning and Construction' (IIPC) in Kaunas (A. Sprindys and V. Stauskas, 1959–1966).[8] It was the last chance to see

the building in its original but empty state, as the whole complex was bought by a large real estate developer for a major reconstruction. Some of the rooms had heavy metal cupboards and stacks of drawers where the internal archives were once stored though these were empty at the time of the visit. It took another five years to discover that various documents, including data from the separate 'Institute of City Planning and Construction' (ICPC), were moved to an empty, non-heated, Soviet-era administrative building. However, in the winter of 2020, notified about the intended demolition of this old administrative building, architectural historian Paulius Tautvydas Laurinaitis initiated the informal safeguarding of the remaining folders from the dust, humidity, and potential destruction. In terms of the legitimacy of this act, there was no official request to deal with these folders, just a group of dedicated people who discreetly collaborated in order to protect the documents from the dump. During winter 2020 and spring 2021, several tonnes of construction and architectural drawings, representing ICPC and IIPC activity from 1970 to 1990, were moved to the Institute of Architecture and Construction (IAC), where the material is currently stored in cardboard boxes.

The relevance and usefulness of these papers and technical drawings was highlighted in 2021, when the architectural guided tours initiative 'Ekskursas' hosted a series of walks around the 'Socialist Modernist' buildings in Kaunas. Complicated library and archive research on one particular building — 'T.Masiulis Elementary School' building (A. Blūšius, 1981) — provided scant information about it, until a full copy of the project documentation was found, which led to a meeting with the architect. As '[t]he architectural drawings at that time were slick and impressively performed on paper' the architect used them to persuade his colleagues.[9] It was an exceptional case of showing how architectural motives (design, responding to the aesthetic and humanistic needs of the society) superseded the political will (to build typified design, cheaper, faster) in the Soviet Lithuania. Without the technical documentation as proof, the story would remain just a story heard in an interview.

UNDISCLOSED ADDRESS TO AVOID LOOTING

A *ghost* archive can be a private archive of an architect that is not fully indexed, or a set of documents held now from a no longer existing institution. One such archive, from what used to be 'Institute of Communal Economy Planning' (ICEP) Kaunas branch, is now managed and controlled by a private company run by ICEP's former director. In the basement of a discreet building, officially unaccounted for in 2023, lay the vast archives of ICEP from its inception in 1962 until 1991. Rows of wooden shelves, with a surviving index, are filled with folders. In 1993, a decree by the then Minister of Environment ordered this particular archive to be dismantled and destroyed. However, understanding the years of hard work put into the projects and designs of the city, the former director recounted that with the help of his employees, the documents were secretly moved from the

2   Morta Baužienė, "Pamokanti Architektūros muziejaus sunaikinimo istorija" [Lessons to be learned from the destruction of the Architecture Museum], *Kultūros paminklai / 23* (2019): 84.
3   Baužienė, "Pamokanti Architektūros muziejaus sunaikinimo istorija", 84.
4   Architecture Fund is a Lithuanian non-governmental organisation, established in 2004, actively engaged since 2010 with separate fields of activity through invited lectures, youth education, exhibitions, publications, https://old.archfondas.lt/en/.
5   Such can be named: autc.lt (hosted by IAC, est. 2009), arch-muziejus.lt (est. 2011), on the occasion of 'Kaunas European Capital of Culture 2022' opened modernizmasateiciai.lt (est. 2019), and others smaller, specialised archimede.lt (est. 2013), miestai.net (discussion platform with user uploaded content), mmcentras.lt (est. 2015).
6   At the end end 2022, Kaunas saw two architectural exhibitions, dedicated to Jurgis Rimvydas Palys and Eugenijus Simas Miliūnas. Both of them started their professional careers in the Soviet Lithuania, at the centralised planning institutes. There are signs and talks about 'appropriation' of their archival drawings and production for the upcoming 'Centre of Architecture', but there are no further details when it will open. Consequently a question arises of who will take custody of their archival material and how.
7   Semen Shyrochyn, *Kyiv: Architectural Guide. 100 Iconic Buildings since 1925*, (DOM Publishers, 2023). Shyrochyn has visited numerous events around Europe as a guest speaker in 2023 declaring the emergency state of architectural heritage of the Soviet era in Ukraine. Due to the war, the Ukrainians despise anything Soviet and destroy monumental art works, sculptures or have no second thoughts to rebuild Soviet architectural heritage.
8   Rūta Leitanaitė, Julija Rėklaitė, and Giedrė Jankevičiūtė, *Kaunas 1918–2015: Architektūros Gidas* (Vilnius: Lapas, 2015), 188.

9   Arūnas Blūšius, unpublished interview, conducted by Algimantas Grigas, 7 June, 2021, around 16:00.

ICEP headquarters to a new location and documents signed to say that the archive was deleted.[10] At the time, the ICEP was responsible for various reconstructions of historic (though not heritage-listed) buildings, and small scale architectural interventions such as street kiosks and public furniture etc. The current caretaker of the archive expressed the will to transfer this true *ghost* archive to a trustworthy institution in Kaunas in the future but so far, no suitable or willing candidate has been identified.

DETECTIVE RESEARCH: TRACES AND PROOF OF EXISTENCE

The main branch of ICEP in Vilnius on the other hand is a regrettable example of how archives can be dispersed or even lost. Immediately following the collapse of the Soviet Union, Vilnius ICEP was split into three private companies: 'Komprojektas', 'Vilprojektas' and 'Archiplanas'. The first stopped rather quickly, but managed to transfer administrative documents and selected design documentation to the Central State Archive in Vilnius by 1993. The second company still functions today and a conversation with its director uncovered the fact that project-leading architects over time took home some project materials.[11] The third company was bought by a construction company 'Vėtrunė' a couple of years ago and it is not known how much of its original documentation has survived.

To understand the complexity of paths in which the original documentation of Vilnius ICEP travelled, a descriptive analysis example is presented:[12] from the perspective of a single year's documents held in the Central State Archive in Vilnius, there are 28 projects documented that started or ended in 1972. These are all apartment blocks, public buildings (schools) or projects related with the reconstruction of buildings in Vilnius Old Town. However, the ICEP archive of 1972 contains 105 orders (indicated by the document numbers) issued in relation to the planning and organisation of work. Therefore, it can be deduced that only a small number of all of ICEP's 1972's projects entered the Central State Archive. Another hypothesis for the low number of projects in the Central State Archive is that some projects relating to public design and small scale architecture were deemed too insignificant to include in the archive. Closer inspection of the file contents of the 1972 projects revealed that they rarely contained a full set of documents, which would normally include (depending on the type and size of the project): GP (site plan), AS (architectural–construction), IN (interior design), EP (early design phase), PP (preliminary design phase), RAS (restoration), MG (wood and metal details), TN (technological), ŠV (heating and ventilation), VK (water and sewage), EL (electricity installation), D (gasification), PV (tactical ventilation, firefighting). At this stage we do not have sufficient information to conclude whether certain technical or early design phase documentation was deleted while actually at the institute, or if it was lost during transfer between physical spaces.

10   Antanas Veselka, unpublished interview conducted by Algimantas Grigas, 25 November, 2021.
11   Audrius Navidauskas, unpublished interview on telephone with the director of 'Vilprojektas', conducted by Algimantas Grigas, 3 November, 2021.
12   The archived projects span 1944 to 1993: https://eais.archyvai.lt/repo-ext/view/295889

STRUCTURING THE INCOMPLETE: HOARDING OR ARCHIVING

Technical documentation of architectural design and spatial planning during the Soviet occupation can make up large sets of data, as each of Lithuania's four largest cities had their own ICPC, IIPC and ICEP branches. While this research touched upon the Kaunas examples, other regional assets of architectural historiography continue to be unaccounted for, or are gradually devalued to the point of being completely dismissed. Currently there is no public body or institution to oversee these processes, and more importantly to implement a national strategic action plan to safeguard the physical records of Socialist Modernist projects in Lithuania. Working with discovered but unaccounted for archival material, the usual mind-set is to think 'I have everything here', but in reality, a much more complex picture prevails, as over time the archive materials have been carelessly depleted through items being lost, unreturned, or privatised (stolen) during the period of political transition.

The technical architectural drawings provide a glimpse into the history of architecture, what kind of tools were used, and how the development of architectural craftsmanship was performed.[13] It can be argued that the piles of dull-looking, technical project documentation folders can represent a non-conventional form of history. In practical studies of urban environment, the files can help uncover at least three modes: (1) unbuilt vision, (2) contrast between what was built and how the project appeared on paper, and (3) a documented attempt to produce human scale architecture by Lithuanian architects in the context of limiting factors. When current studies on physical environment are overlaid with social, cultural or gender histories, the rich, research potential that lies within technical documentation — accessed through these three modes of study — is yet to be uncovered.

A WORD ON ETHICS OF RESEARCH

The ambiguous state of Socialist Modernism archives implies an unregulated nature of scientific research. Currently selected actors can attempt to track and claim the archival resources for themselves for self-use, which could be a threat in limiting public access. Without an authoritative major institution, pragmatic individual 'appropriation of archives' for architectural research is clearly a concern. There is a real fear that institutions or single researchers might race to become the first or sole holders of archival material which would grant them the power to control, write projects, gain funding and consequently form the narrative around the research subject. This provides an additional stimulus to open a well-respected institution, like a 'Centre

13   During Open House Vilnius, 13–14 May, 2023, it was possible to visit the Ministry of Agriculture of Republic of Lithuania (architect N.Bučiūtė, 1962–1967) and see a typical draughtspersons work cabinet. On the table one could see personal objects of N.Bučiūtė, typical tools for an architect of Soviet occupied Lithuania: a ruler with a rolling cylinder for parallel projections, a double-edged safety razor (for literal cutting out drawing errors from the surface of paper), https://www.openhousevilnius.lt/programa/lietuvos-respublikos-zemes-ukio-ministerija/.

of Architecture' which would smooth out the individual rivalries between institutions or researchers and ensure that the highest quality of scientific research and behaviour is conducted through regulated practices, and with openness and transparency.

CONCLUSION

Tackling the ghost archives of Lithuania's Soviet-era centralised planning institutes will allow us to uncover the full extent of the problems inherent in carrying out an audit of the most valuable parts of the architectural design projects and their legacy. The specificity is in the way architects were forced to work: navigating between political commissions and architectural ambitions all dispersed amongst early, preliminary, technical and construction phases. On top of that was a continuous informal influence from team members and engineers at the planning institutes, where architects and engineers used to work in larger teams, influencing each other, producing internal competitions, rivalry and qualitative criticism. As a result, it is a short-sighted strategy to form the archival record only through core drawings (like a site plan and/or architectural-construction plan/section/elevation of the project) as future researchers will be biased and hindered by this flat understanding. We know that during the Soviet-Era, building projects and typified designs were the products of a collective creation, and yet today's architectural historiography, architectural guides, and digital data bases attribute just one or two main authors. Future research of Socialist Modernist architecture will need to expand the views on the context (various administrative documents from centralised planning institutes), multitudes of voices (conducting interviews with non-architects and cross-checking facts) and, most importantly, safeguarding the physical documentation copies of architectural production — drawings, project descriptions and technical planning — to their full extent before they disappear into dust.

Martha Levisman in ARCA-FADU, photograph taken between 1998 and 2001.
Martha Levisman Fund, Di Tella Architecture Archive.

Isabella Moretti (Torcuato Di Tella University, Torcuato Di Tella Architecture Archive / Cooperativa Espacial)

Unboxing the Martha Levisman Collection: A Case of Cultural Activism arrives at the Di Tella Architecture Archive

This text delves into the symbiotic relationship between an archive, an archivist, and a collection. Specifically, the connection between the ARCA archive, archivist Martha Levisman, and architect Alejandro Bustillo. This investigation took place in the context of the reception of Martha Levisman's documentary collection at the Di Tella Architecture Archive as an initial operation known as unboxing, which serves as an opportunity to construct an unstable and speculative cartography. In this case, the cartography forms the foundation for questioning institutional responsibility, disciplinary recognition, and the affective activism of those who manage collections.

A BRIEF DESCRIPTION OF MARTHA LEVISMAN'S COLLECTION

In 2023, Martha Levisman's three sons donated a diverse range of documents to the Di Tella Architecture Archive. Levisman (1933–2022) was an architect, archivist, restorer, curator, publicist, and architectural critic in Argentina often described as a controversial and eccentric figure.[1] Her name has been associated with Alejandro Bustillo (1889–1982) since the late 1970s when he decided to donate his entire body of work to her after his death, sparking her interest in archives and laying the base for the history of architectural archives in Argentina.[2] The majority of this initial donation — over 10,000 plans and drawings and a thousand photographs — now constitute the Alejandro Bustillo Collection, which was donated to the Torcuato Di Tella University's Library in 2012, forming one of the two foundational collections of the Di Tella Architecture Archive ten years later.

In its preliminary inventory state, the Levisman collection can be divided into six major groups:

1. 'Bustillo' refers to the material Levisman retained after the donation to Di Tella in 2012.

1   According to different conversations with colleagues of Martha Levisman during July – August 2023.
2   Along with the work of Susana Castillo y Lucrecia Guarreras, who started in 1993 to digitise and catalogue State architecture at the CeDIAP (Center for Documentation and Research of State Architecture), and Marta García Falcó, who was the first director of the archive at the SCA (Central Society of Architects) in 1994.

2. 'Other Architects' comprises documentation of canonical works from the first half of the 20th century in Argentina (it is unclear how Levisman acquired these documents).

3. 'Exhibitions' includes minutes, photographs, and brochures from exhibitions held between 1982 and 2002 when Levisman served as an independent curator and academic secretary at the Faculty of Architecture, Design, and Urbanism at the University of Buenos Aires (FADU).

4. 'Personal' consists of Levisman's independent work as an architect and restorer: personal diaries, correspondence, lecture notes from when she was a student and a teacher, diplomas, travel photographs, various newspaper clippings related to restoration, herself, or architecture in general.

5. 'Design' constitutes the compilations and research for the book *Diseño y producción de mobiliario argentino, 1930–1970* published in 2015.

6. 'ARCA' gathers the records, inventories, processes, and contracts of the architecture archive founded by Levisman in 1995 alongside conservator Adriana Ten Hoeve and architect Pablo Beitía.

Within a set of boxes some photos stand out. They aren't architectural records but were taken at the FADU. A control tape is affixed between two doors to restrict access. These photos document a traumatic event for Levisman—the closure of ARCA's institutional phase, which had been absorbed by the faculty between 1998 and 2002.[3] This forced the collection to move from the university to a warehouse and later to Levisman's residence and personal studio. Instead of designating a specific location where the documents could be deposited and preserved, the archive became mobile, dynamic, and intimate. As a result, Bustillo's photo albums from Paris at the beginning of the twentieth century, for example, were stored in boxes in Levisman's closet and could be consulted upon demand in her bedroom in a cozy yet precarious exhibition. According to Argentine philosopher Grüner: "Someone must assume the role of 'owner', let's say, an honorary one. It's not common, in this space of imaginary recognitions, for the custodian-owner to remember that books or artworks, before being a (public or private) property, are the expression of a human experience, often taken to the very edge of what normalised, institutional' use of words or images can tolerate."[4]

The architectural archive and the personal belongings became intertwined to the point where distinguishing them became difficult. Ultimately, when these materials reached the Di Tella Architecture Archive, they did not form a distinct collection but were inseparable from the personal fund. What does this mean for the document's trajectory? How do personal contingencies merge with the institutional construction of an archive? What can we learn from this important yet marginalied story of institutional memory?

A FOUNDING MYTH:
ALEJANDRO BUSTILLO'S NATIONAL ARCHITECTURE

Much of Alejandro Bustillo's work consists of landmarks in the Argentinian collective memory, such as the Central Bank of Argentina, the Rambla and Casino in Mar del Plata, or the Llao Llao Hotel in Bariloche. Most of his private commissions, residences and rental houses in uptown Buenos Aires as well as the estates and infrastructure in the Pampa region, came from the local agro-exporting elite of which he himself was part of. In both his theoretical writings and monumental works, Bustillo proposed a 'national classic style' that corroborates a line of thought of an antimodern nature that had been supported by the way in which he produced his works.[5]

He was a vocal opponent of the *moderns*, for whom, in the words of Francisco Bullrich, ‹National expression, for this reason, cannot and will not be the result of a program or theoretical preconception, which can only result in clichés'.[6] From the 1950s onwards, his presence and recognition declined until he was rediscovered in the late 1970s and early 1980s, as historicist revision of architecture and harsh criticism of the Modern Movement gained momentum. During the period of *La Escuelita,*[7] the first exhibition of Alejandro Bustillo's work was organised in 1982. It was curated and organised by Levisman.

Thus, Bustillo's work presented itself as both constitutive and operational in the original construction of Argentine architecture, in a futile search for 'national architecture' that Levisman perpetuated by both publishing the book *Bustillo: un proyecto de arquitectura nacional* (*Bustillo – a National Architecture Project, 2007)* and also by adopting the idea or need of establishing a national collection. In 2000, Levisman stated in a conference at ICA/PAR during the World Congress of Archives: 'We, in Argentina, are in the initial stage of the central theme of this panel. We are gathering collections, reflecting on our heritage, and "thinking" about the best way to approach appraisal given certain particular characteristics of our archival material. This is an excellent opportunity to find identifying traits and differentiate our national production from international design and architectural history, highlighting contents and programs. Our heritage is diverse and heterogeneous and is scattered within a chaotic order that characterises the diversity of Latin America'.[8]

3   Interview with the author in April 2022.
4   Grüner, Eduardo. "Ni Caverna, ni laberinto: Biblioteca" in *La Biblioteca*, No. 1, (Buenos Aires: Summer 2004–2005, 24). Translation by the author.

5   Shmidt, Claudia. "Consideraciones tardías. Lecturas filosóficas en la arquitectura de Alejandro Bustillo", 2007. https://cdsa.aacademica.org/000-108/428.pdf [Accessed 1.09.2023]
6   Bullrich, Francisco. "Arquitectura Argentina, hoy" in *Summa*, (No. 1, 1963, 56). Translation by the author.
7   La Escuelita was a secular teaching space and private center founded when public universities were intervened by the military government after the coup in 1976.
8   Translation by the author.

The Bustillo Collection was transferred to Levisman in 1982; the name ARCA emerged in 1995; the civil association, registered under the same name, was established in 1997. It is an acronym for *ARchivos de ARquitectura Contemporánea Argentina* (Archive of Contemporary Argentine Architecture). The name is a creative way of questioning the difference, or intentional synonymy, between archive and architecture (the inscription of place), while also openly addressing the obsession that links the archive with the ark and the quest for an origin. As Derrida canonised in *Archive Fever,* archive comes from *arkhé*, which refers to both 'beginning' and 'mandate', meaning ´where things begin´ and ´where people give orders'. In this sense, the disposition of the *arkhé* is intimately linked to the unfolding of myth. According to Andrés Tello, the social machinery of the archive works similarly to the mythological machine by instituting the symbolic elements that enable the reproduction of various founding myths of a community in order to establish an apparent origin to hierarchise and classify records.[9] It is also noteworthy that 'contemporary' is chosen in the organisation's title. On the one hand, this reflects the desire to belong and participate in the present, and on the other hand, it avoids the complexity of 'modern', as Bustillo reluctantly fits into that category only due to temporal coexistence. Moreover, if one replaces 'contemporary' with 'modern', it becomes ARMA (weapon in Spanish), which interestingly is how Levisman characterised archives in one of her notebooks: 'The archive is a weapon that the government must maintain'.

SITUATED PRESERVATIONISM:
ARCA'S UNRELENTING QUEST FOR INSTITUTIONALISATION

Everything pointed to ARCA finding a permanent home at the Faculty of Architecture of the University of Buenos Aires, where ARCA-FADU was established in early 1998. Cautiously, Levisman had set up the civil association in December of the previous year as a legal and independent entity, indicating distrust towards local institutions. It resided there for four years in a comfortable space of 120 square meters with a treasury, a consultation room, and a panoramic view of the Río de la Plata. These four years were marked by intense work, archive professionalisation, and diversification of tasks: new collections were acquired, catalogued, and a database system was adopted, which Levisman had brought from her active participation in the ICAM (International Confederation of Architectural Museums) congresses.

In an interview shortly before Levisman passed away in June 2022, twenty years after her dismissal, she only wanted to talk about that episode: a bitter memory that brings us back to questions of institutionalisation and permanence. The then Dean, architect Berardo Dujovne, declined

to comment on the matter.[10] There is no official explanation for the dismissal; it could have been due to lack of funding, human resources, or political disagreements. However, the unstable recognition of local heritage work and the safeguarding of its documents as the memory of a disciplinary and professional practice are causes for concern.

ARCA's trajectory was marked by a constant search for sponsorships, from the National Academy of Fine Arts between 1995 and 1997, to the Ministry of Worship and the Professional Council of Architecture and Urbanism in 2002, to name a few. Their responses, though always positive, resulted in verbal support without significant resolutions, funding, or responsible future forecasts.

Documentary archives in Argentina fluctuate on the compass of the shifts in a precarious cultural policy. Recognition, or 'imaginary recognitions´ as Grüner argues, are scarce, sporadic, and the fate of documents often depends, especially in the case discussed here, on that symbiotic, affective, and personal relationship. ARCA existed within the realm of its documents, scattered throughout the city in different residential and work locations: ARCA was an archive without a place. The former director of the National Library in Argentina, Horacio González, called 'situated preservation': '[the] preservation that is also imbued with scepticism about the progress of cultures and institutions. [...] In the obscure dialectic of archives, the collector plays the role of the state as both accumulator and guardian, simultaneously with the role of fervent and manic thief'.[11]

In this sense, the archivist's attachment overflows the attempts of institutionalising and can be understood as a form of cultural activism. Lucas Saporosi investigates the epistemological implications and methodological construction of an affective archive, which are essential for coming closer to understanding the agency of the archivist. Drawing on the idea of affective economies, he focuses on ‹how emotions and affects record an accumulation of value that does not reside in the objects but is the effect of their circulation and contact'.[12] The analysis emphasises on the mechanisms of emotion production to understand their distribution circuits and the social situations and contexts of reception. In this sense, the Alejandro Bustillo collection embodies the institutional setbacks of ARCA and its biased yet dedicated construction by Levisman. It matters how the collections are sustained, situated, and reproduced; it is a warning and a call for cultural activism in the context of poorly designed or non-existing policies in institutions that increasingly witness the displacement of local archives.

9   Tello, Andrés. *Anarchivismo: Tecnologías políticas del archivo* (Adrogué: La Cebra, 2018, 53). On another note, also in architectural history, the ark, as an archetypal construction model, challenges the myth of the Vitruvian primitive hut (Liernur, Francisco. "El Arca de Noé. La controversia sobre el incómodo origen Oriental de la Arquitectura de Occidente." Unpublished.)

10   Interview with Berardo Dujovne in August 2023.
11   González, Horacio. "El archivo como teoría de la cultura" in *La Biblioteca*, No. 1, (Buenos Aires: Summer 2004–2005, 66). Translation by the author.
12   Saporosi, Lucas. "Implicancias epistemológicas y reflexiones metodológicas en torno a la construcción de un archivo afectivo" in *Crítica Contemporánea: Revista de teoría política* (Buenos Aires: Dec. 2017, 142)
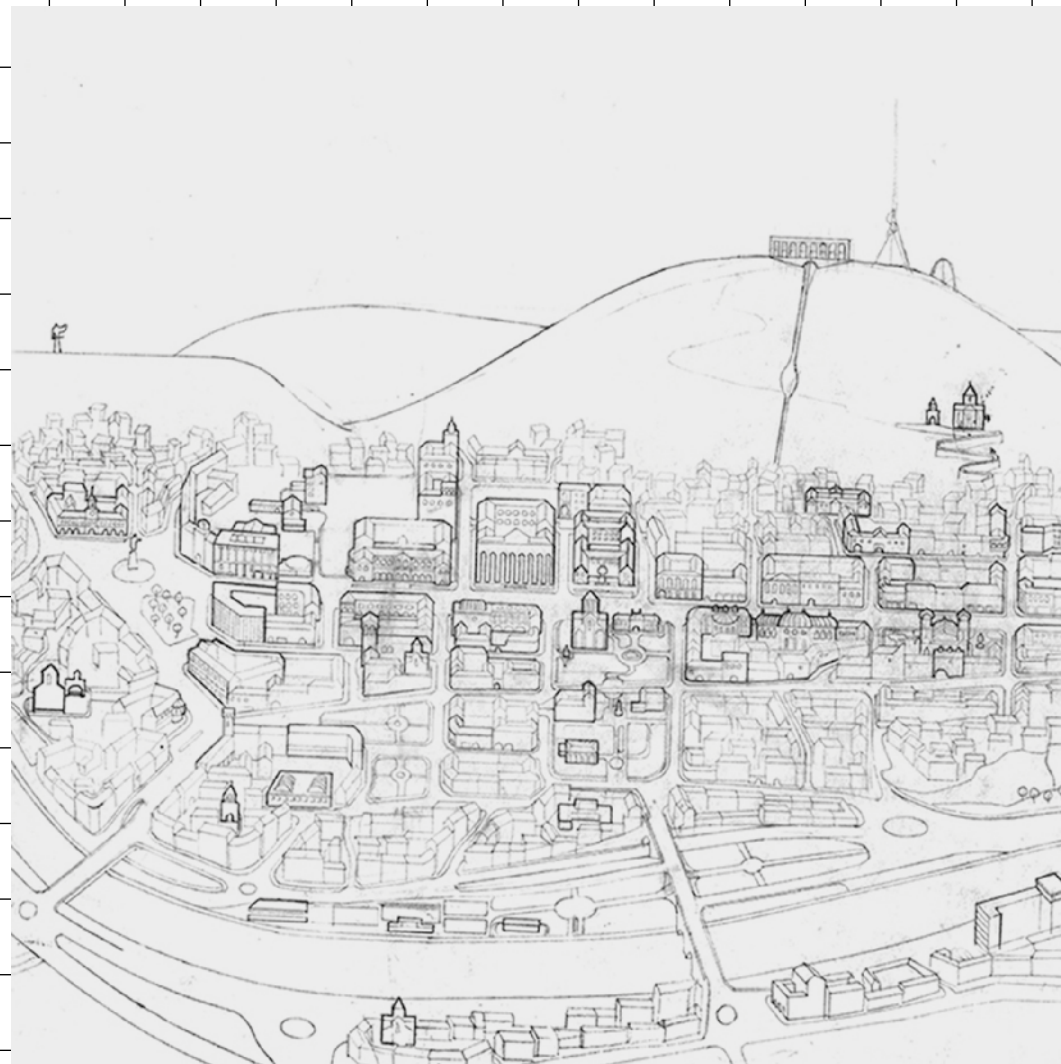
Tbilisi by Ramaz Kiknadze, 1970, edited version.

Mariam Gegidze (Tblisi Architecture Archive)

Unpacking Soviet architecture collections: Tbilisi Architecture Archive

As defined by Suzan Briet in her 1951 manifesto 'Qu'est-ce que la documentation?', documents are "a proof in support of a fact",[1] intended to represent, reconstruct or demonstrate a physical or intellectual phenomenon. Free access to historical information kept in archival documents is crucial not only for every society but also for every discipline. Thus, documents that are valuable to architecture should be accessible, as this is the only way to obtain an evidence in order to produce different versions of the past and present. They may also help us to come up with possibilities and alternative strategies for dealing with the built environment in the future. Only the accessibility and visibility of such documents reveal the traces that can be recorded, interpreted and retold. The documents are in this way re-contextualised, and thus previously unknown narratives and connections emerge in the process. Although they contain stories that may be contradictory, may be various, may change and be presented in multiple ways, while the item itself stays the same. If there is no institution, that collects, organises, selects, describes and makes them available, as well as provides a systematic access and takes care of them, the data will be lost, along with the stories and knowledge the documents carry.

Nowadays such systematic access to architecture data is mainly concentrated in Western Europe and North America, where the majority of Architectural Centres and Archives with significant collections of documents are to be found. There are far more architectural archives in Germany than in all post-Soviet countries combined. Institutions like these play an important role in increasing the appreciation of certain architecture movements, styles and traditions. They give status to particular persons and buildings. Even if certain institutions pursue different strategies, their aim is to increase visibility for architecture and the built environment. The absence of such institutions means a great loss for the local architecture historiography and knowledge. Imagine, what it would look like, if there were no architecture archives, centres or museums at all? If there were several scattered collections waiting to be found and used? If these hidden collections would contain relevant and important knowledge that could help us understand the past and lead us into the future?

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1   Suzanne Briet, *What is Documentation? English Translation of the Classic French Text (Lanham: Scarecrow Press, 2006)*, 9.

GEORGIAN CASE

The accessibility of archival materials is particularly important in a context where processes of memory formation happened very rapidly and the examination of past events is impulsive. After the fall of the Soviet Union, the former Soviet republic of Georgia entered a severe political, economic and social crisis. In the early 1990s, during the military conflict also known as the Tbilisi War, which took place in the newly established independent Republic of Georgia, the government quarter, KGB-building and archives kept there were destroyed.[2] At the same time several museums and archival collections were burned down.[3] Since then, the state-run design bureaus and institutions of Soviet Georgia have dissolved one after the other. Most of them have been victims of a rampant privatisation of buildings and closures of offices. The architecture archives, which were kept there, has been scattered.

Most of the historical archives are currently preserved at the National Archives of Georgia.[4] The National Archive also keeps the rescued collections of the state architecture and planning bureaus from the Soviet period. The holdings contain official documents and architectural drawings. Even though the archival materials can be used by researchers, legislation and practice of accessing them are restrictive.[5] Besides, an unknown number of documents have not yet been catalogued and remain inaccessible. As a counterpart to the invisibility, or even destruction of archival files in public Georgian institutions, some important archival documentation can be found in the family archives of the architects and engineers. This rare material contains singular concepts, visualised ideas, original drawings, sketches, handwritten notes and construction documentation regarding outstanding examples of the local architectural heritage from the 20th century. However, these materials are not publicly accessible and there is no specialised institution in the country that could evaluate and preserve them. Documents like these represent the main source of information about unique ideas of architecture of the past century. The non-existence of architectural institutions has played a crucial role in the discontinuity in local architectural historiography and the comprehensive loss of such holdings within the discipline. In many cases, the researchers, planners and other interested individuals are challenged with a gap in history.

TBILISI ARCHITECTURE ARCHIVE

In 2020, a group of three researchers and architects from Georgia – Nino Tchatchkhiani, Natia Abasashvili and myself – started a conversation around

alternative scenarios for sharing information and documents to develop new perspectives on the architectural legacy. Through this process we wanted to explore, whether it is possible to find methods for increasing visibility and encouraging public debate on the past architecture era without neither long-term funding nor institutional status. What are our possibilities to reconstruct and communicate architecture stories without an institutional background? How could we become more than a source and play an active role in memory making?

In this context, our group started to investigate ways to make the hidden architecture collections visible. As a response, we set out to organise a self-managed and non-institutional organisation and subsequently launched a website named Tbilisi Architecture Archive (TAA), which combines a purely digital archive with an informative platform.[6] Despite not possessing any of the archival items listed, this website provides archival material from different sources and basic information about particular projects. Besides the database, TAA works as an informative platform through re-reading and describing selected materials. It operates beyond the established institutions and brings together records from official and private archives, some of which are very difficult to access. TAA gathers documents previously scattered in multiple collections and publishes them open access. In this way connections arise between various collections that would otherwise not be possible. Through encountering, describing and connecting different documents to each other, they become evidence of their epoch. As a matter of fact, every interested architect, engineer, individual, volunteer, researcher or research organisation can use this space for sharing their collections or documents and become a co-organiser of the archive, enabling the online database a continuous growth. In this way, it allows the narrative to take different routes and open new perspectives to promote debates about the architecture heritage in Georgia.

Our project is currently focused on the largely overlooked Georgian Soviet Modernism, which marked the beginning of the last phase of Soviet architecture after Stalin's death, lasting for thirty years until the end of the Soviet Union. Most of the unexplored private collections that can be found date back to this period. From the beginning of the 1960s the republics of the Soviet Union were able to strengthen their political and economic power and build their own public representational buildings and monuments, stylistically less censored by the centralised planning requirements from Moscow,[7] which caused Soviet Modernism to create a distinct 'differentiated architecture' in every region. According to the architecture critic and publicist Wolfgang Kil, this period was characterised within architecture by the fact that the national self-will of the peripheral territories was able to awake.[8] In the southern 'peripheral republics' of the Caucasus, local

2   Megi Kartsivadze, "State Memory Politics in Georgia after 1991 and Similarities with the Other Post-Soviet Countries," in *2nd International Conference – Openness of State Archives and Memory Studies*, ed. Thomas Welsford (Tbilisi: Institute for Development of Freedom of Information, 2019), 54–57.

3   Irakli Khvadagiani, "Owning the Past – to Control the Present," in *Censored? Conflicted Concepts of Cultural Heritage*, ed. Ayşegül Dinççağ Kahveci et al (Weimar: Bauhaus-Universitätsverlag, 2022), 160–164.

4   Nino Merebashvili-Fisher, "Access to Archival Documents in Georgia," in *2nd International Conference – Openness of State Archives and Memory Studies*, ed. Thomas Welsford (Tbilisi: Institute for Development of Freedom of Information, 2019), 27–30.

5   Merebashvili-Fisher, Access to Archival Documents in Georgia, 27.

6   https://taa.net.ge/en/. Visited: 02–10–2023.

7   Dietmar Steiner, "Sowjetmoderne anerkennen" *Bauwelt* 19.2011, https://www.bauwelt.de/themen/betrifft/Sowjetmoderne-anerkennen-AzW-Wien-Debatte-Polemik-Dietmar-Steiner-2089212.html.

8   Interview mit Wolfgang Kil, "Russland, Zentralasien und Kaukasus" in *SOS Brutalismus. Eine internationale Bestandsaufnahme*, ed. Oliver Elser et al (Zürich: Park Books, 2012), 227–231.

architectural heritage was drawn upon, so that 'strong regional identities based on a rich tradition' could emerge there.[9] During this period in the Georgian SSR several public buildings were built using a specific local architectural style.

Today, Soviet Modernism experiences a very bad reputation in Georgia and is ignored in Soviet architectural historiography as well as in the narration of local traditional history beyond professional circles. In this context, the TAA aims to share unknown stories about mostly well-known concepts and buildings with problematic reputation, exploring alternatives to change the situation that has brought such buildings into oblivion, negligent preservation and even demolition.

HOW TO COMMUNICATE ARCHITECTURE OF BAD REPUTATION?

The material of more than 25 architectural projects with descriptions in Georgian and English are already published on the TAA website. Some of which have not been realised, some have already been demolished, some are widely known, while others have never received the attention they deserve. Most of them are located in Tbilisi, some are outside of Georgia or in the Russian-occupied territories. The descriptions contest urban myths and are based on facts. Since the beginning, our team decided to focus on the original stories backed by evidence in the shape of archival documents and other sources. Descriptions are therefore brief and lexical, gathering the information from sources of various type and material from different collections whenever it's possible. Alongside a list of projects, the website provides an index of factual biographical information about architects, researchers and engineers, as well as their private photographs from family and state archives. The website also includes a collection of artistic works and a glossary in which all formal terms, mostly from Soviet times, are explained. Parallel to updates of the website, we send out a newsletter four times a year. The website usually has about 20–30 visitors per day. For the three of us working part-time without any long-term funding, that is a big number. Nevertheless, we have discussed a lot about how to break this circle and make our voice heard outside the discipline.

In 2022 we participated in a group exhibition and published our first printed edition, both entirely dedicated to one specific building– an example of local Modernism, the aquatic sports complex known as 'Laguna Vere'. We have chosen this particular building because of its architectural and social value, as well as its current condition. 'Laguna Vere' was open all year round for 30 years and played a significant role in the lives of many citizens. Sadly, it has now been closed for almost ten years and thus Tbilisi has lost one of its most beloved public destinations. Generations of local residents share a strong emotional attachment along with memories connected to this outstanding

example of Georgian Modernism, which today is abandoned and on the verge of complete demolition. During the process we asked for photos and materials related to the 'Laguna Vere' on social media, and received hundreds of them, including private amateur pictures, entrance tickets, notes from diaries, posters from competitions etc. By collecting and presenting different documents from such diverse sources, the multi-layered value of 'Laguna Vere' was revealed. Our exhibition was well attended, nevertheless, again, most of the visitors belonged to the discipline.

WHAT'S NEXT?

With the archival activism we aim to achieve more visibility for architecture in general and for the Soviet architecture period in particular. However, so far, we have not been able to find the appropriate way to communicate our collections to a wider audience. Through a social media campaign, we aimed to recirculate positive memories about the building and its formal use and raise awareness of its current bad condition as well as displaying the importance of such public urban landscapes in the central areas of Tbilisi. The sharing of the user's perspective was significant to initiate debates about positive aspects of Social Modernism architecture. As a result of the exhibition a brochure dedicated to the 'Laguna Vere' was published, combining the material we received with archival and architecture documents.

Through this combination of classical archival and alternative, nonprofessional documents, that were not meant to be collected or exhibited, we could almost present the whole picture of this particular building. In this way it was possible to demonstrate not only its architectural quality but also its social values, relevance and usability. Since then, we have been thinking more about including this kind of non-archival materials directly into our research and showing it to our audience. We believe this could also be the way to activate debates regarding Social Modernism and its qualities. In general, the documents valuable to architecture are more diverse than the ones stored in traditional archival collections. The future of institutions and organisations that collect, present and communicate architecture, are based on a rethinking of the material they hold. The equalisation of alternative, and thus non-archival documents and records, could help make architecture accessible to a wider audience.

9   Dietmar Steiner, "Sowjetmoderne 1955–1991", in *Sowjetmoderne 1955–1991. Unbekannte Geschichten*, ed. Katharina Ritter et al. (Zürich: Park Nooks, 2012) 6–8.

Top Left: Slide Row 1: Michael Hugo-Brunt, Row 2: John White, Row 3: Ruth Durack, Top Right: Hugo-Brunt Archive, Drawer 1 (Detail), Bottom Right: White Archive, Slide Sheet 30,32,47 (Detail), Bottom Left: Durack Archive, File N:New York New Jersey (File Index Detail).

Philip Goldswain (University of Western Australia)
and Mark Sawyer (University of Tasmania)

Click, Whirr, Jam: Architecture in and through the Photographic Slide-Lecture

INTRODUCTION

Before PowerPoint, before Keynote, the 35mm photographic slide was the technology *de rigueur* for the didactic transmission and reception of architecture. As teaching institutions decommission their analogue slide collections, we face an interregnum in which slides are not quite junk but still not quite precious. This is a critical moment to explore the distinctive qualities of the medium and the social practices it has been a part of. In this essay we loosely apply the notion of 'affordances' as described by sociologist Jenny L. Davis, to consider how analogue and digital slide-lectures differently '*request, demand, encourage, discourage, refuse* and *allow* particular lines of action and social dynamics'.[1] In doing so we speculate on what has been lost and what gained in the socio-technical shift from analogue to digital slide-lectures in architecture.

Slide-lectures are a 'performative triangular consisting of speaker, audience and image', all sharing a single dialogic space.[2] Although scholars working in art history and archival studies have systematically started to critically examine slides and lectures, their role in architecture is only now being examined.[3] The acknowledged progenitor of the genre is Swiss art historian Heinrich Wölflinn, for whom double-slide lectures were both 'laboratory stage' and 'experimental theatre.'[4] The sequenced projection of photographic slides in the darkened room popularised by Wölflinn, quickly spread to other visual disciplines, including architecture, becoming a mainstay of their discursive construction. For architecture, the attraction is obvious: buildings are costly, large, and immobile; slides on the other hand are relatively inexpensive and easy to transport. The slide-lecture, therefore became an invaluable way of mediating architecture for geographically distant audiences—something that was particularly valuable for those working a long way from cultural centres of Europe and North America, where first-hand encounters of canonical buildings were less likely.

1   Jenny L. Davis, *How Artifacts Afford: The Power and Politics of Everyday Things* (Cambridge, Massachusetts: MIT Press Academic, 2020), 11.Massachusetts: MIT Press Academic, 2020
2   Robert S Nelson, "The Slide Lecture, or the Work of Art" History" in the Age of Mechanical Reproduction," *Critical Inquiry* 26, No. 3 (2000): 415.
3   Catherine Mejía Morena, 'The "Corporeality" of the Image in Walter Gropius' Monumentale Kunst Und Industriebau Lecture', *Intermédialités*, 24/25, (2014), https://doi.org/10.7202/1034165ar [accessed 20 July 2023]; 'Photographs of Silos: On the Contingency of a Modern Photographic Canon', *Architectural Histories*, 10.1 (2022), 1–30.
4   Dan Karlholm, "Developing the Picture: Wölfflin's Performance Art," *Photography and Culture* 3, No. 2 (2010): 208.

SLIDE-LECTURES SOCIO-TECHNICAL PRACTICE

Putting together a lecture about architecture in the twenty-first century has become a thoroughly digital affair. Perhaps this should be unsurprising given the wholesale and society-wide shift from 'old' analogue to digital 'new' media, that has taken place in recent decades.[5] The ubiquity of desktop computers and software platforms readily 'operated by one multi-skilled person, using one interface, [and] one mode of physical manipulation' make it straightforward for an individual to put together a slide-lecture without every encountering a building, a camera, or even another person.[6] 'Google' searching for images, downloading from online repositories, and placing into a digital presentation all happen with just a few clicks and an internet connection. This technological shift to digitality *encourages* what linguists what term multimodal discourse because with computers a visual presentation can be seamlessly combined with writing, 3D models, video footage, or music.[7]

Not that long ago, a slide-lecture was a very different affair, enrolling different forms of discourse, material relations, and social practices. Assembling a 35mm slide-lecture meant getting off your arse and talking to people: walking downstairs to the slide room, chatting with specialist staff responsible for caring for the shared slide libraries (for us, a nice man called Raymond), bumping into, or avoiding academic colleagues trying to access the same cramped space, finding the right drawer from which to prise a slide sheet, and holding up the light to quickly scan the twenty-four slides for the one you wanted. Then on the shared space of a communal light table, the 160 slides required for a double-slide lecture would be spread out panoramically prior to moving them to the circular form of the carousel. The social and academic hierarchy that controlled access to the slides and the light-table would see more junior staff members retreating to their offices, to put together their lectures on much smaller light tables.

MINOR COLLECTIONS

In addition to the general slide libraries administered by institutions (like the one Raymond looked after) many architecture academics held personal collections—little cabinets packed with careers' worth of precious, 'mediated memories' accumulated from holidays, grand tours, and sabbaticals.[8] Since 2018, we have been gathering redundant personal collections of 35mm slides from the School of Design at the University of Western Australia. Read as both visual texts and traces of socio-material practices, these minor collections provide a grounded way to look at how slides have been

5   Lev Manovich, The Language of New Media, Leonardo. (Cambridge, Massachusetts: MIT Press, 2001), 20.
6   Gunther R. Kress and Theo Van Leeuwen, *Multimodal Discourse: The Modes and Media of Contemporary Communication* (London: Arnold, 2001), 2.
7   Kress and Van Leeuwen, *Multimodal Discourse.*
8   José Van Dijck, "Mediated Memories: Personal Cultural Memory as Object of Cultural Analysis," *Continuum* 18, No. 2 (2004): 261.

enlisted in architecture's didactic practices. Particularly salient for us have been the personal slide collections of Michael Hugo-Brunt (1924–1988), Ruth Durack (1951–2011), and John White (1927–2020): three individuals who operated on the periphery of global centres but were central to local architectural discourse, between them teaching generations of architects, urban designers, and academics in Perth, Western Australia, the most geographically isolated capital city on Earth.

A small brown and yellow metal cabinet with two drawers holds the amassed slides of Hugo-Brunt, a highly mobile, self-described orientalist who made his way to Perth via New York, Toronto, Hong Kong, and Cape Town bringing images of global architecture with him as he travelled. The period of the slides' accumulation is reflected in the shifts in technology from rudimentary printed glass slides to cheap commercial transparencies, augmented by those made by the various universities that employed this peripatetic character. With no index, the detailed density of the metadata of the slide mount allows us to speculate on their origins, production, and use.

Four white-painted timber shelves units and thirty-one removable metal files house the 22,500 slides gathered by Durack a materialisation of her professional work and travel as an expatriate urban designer in North America, with teaching 'utility' slides labelled to distinguish them from main body of the personal collection. Ordered post-facto to suit the spatial constraints of their housing, the addition of a numbering system and a customised index card serve as a reference for collection. The sparsity of detail on the slide and index points to their status as an *aide de memoire*, rather than the individual image's importance in a narrative history of a discipline.

One dense, bottom-row drawer of the school's collective slide library holds White's archive of almost 3600 images– a pedantic, parochial determination to document Western Australia's towns and buildings (with one incomplete sleeve of snapshots of the Sydney Opera House). The collection is split: half are colour 35mm slides fastidiously documenting the state's buildings and the other half are rephotographed reproductions of an equally extensive but older archival collection of black and white prints. Custom-made slide sleeve stickers accommodate crampedly handwritten information with scant text on the mount pointing to the reliance on the intervention of White as author/producer to make sense of the images and their combinatorial logic in the lecture performance.

PERFORMING THE SLIDE-LECTURE

The visual assemblages of Hugo-Brunt, Durack, and White, might appear to us now as precious, fragile objects but to the people who used them they were the everyday media required to construct performative narratives about architecture. The audience they were intended to reach is not altogether different from the PowerPoint presentation sitting on my desktop

for my own slide-lecture tomorrow, but the technology imprints itself differently in each case. As Eisenhauer puts it '[d]iscursively, PowerPoint is not a slide projector without a slide tray'.[9] Both digital and analogue slide-lectures rely on visual grammars and an authoritative presenter to get their message across—but they do so in different ways. Our broader project is identifying identified important differences but, in this essay, we are able to focus on just two: semiotic multimodality; and social practices of collection, assembly, and performance.

In the three collections we study, the slides themselves are monomodal media (images without writing). Any descriptive writing that supplements the visuality of the slide image is handwritten or typeset marginalia on either the slide mount (Hugo-Brunt), slide sleeve stickers (White), or in an adjacent index (Durack). These written texts were not projected to the slide-lecture audience, visible only in the process of assembly. Analogue slide-lectures *encourage* a kind of distributed and networked intertextuality rather than synthetic multimodality. Written texts are not found in the image, but they are elsewhere in the assemblage: assigned readings, typed lists handed to an audience, or handwritten on a board alongside the lecture screen. In the process of creating a projectable image from an existing image, the analogue slide indexes the semiotic modes of the source media. White's slides generate an analogue slide twin of his equally extensive print archive, Hugo-Brunt recorded pages from books, sometimes his own publications, while Durack meticulously applied tape to the slides to mask out any vestiges of the antecedent media.

We might say that the analogue slide-lecture *resists* the synthesised and seamless multimodal discourse that digital slide-lectures seem to *encourage*. In the analogue slide-lecture there was little textual information—just images organised in choreographed sequence with the presenter's voice-over as a soundtrack. This ad-lib or scripted verbal information is now severed from the images and their sequence. With this permanent separation of lecture text and from the visual choreography of the slide-lecture we can only imagine how the didactic presentation on French utopian planning (Hugo-Brunt), outback Kalgoorlie (White) or New Urbanism (Durack) that might be constructed from these visual resources.

Our second point focuses on changing social practices afforded by the two kinds of slide-lectures. The analogue lecture mobilises a network of local actors and technologies that work together to create the performance. After the negotiation and assembly at the light table, carousels were carried carefully to a lecture theatre and loaded on the projectors by an assistant. The room would be darkened and the voice of the presenter (either reading a prepared script or responding to the slides) provided a verbal backing track to the visuality of the slides. A timber pointer might be used to draw attention to a detail on the screen, casting a shadow across the slides.

The advance of the slides was accompanied by the telltale sound of the slide being lifted out of the projector, the plastic carousel rotating and the next slide falling into place. The ominous clunk of a jam would necessitate a pause in the lecture while the offending slide was removed and righted.

An analogue slide-lecture was a multi-party choreographed performance that had to negotiate the *demands* and fragility of the various media technologies (mount, sleeve, drawer, light table, slide, carousel, projector, lectern controls). But also importantly, it also involved a cast of other people. Hugo-Brunt, Durack, or White couldn't make a lecture without talking to Raymond or enlisting a projection assistant. Colleagues might borrow personal slides or negotiate the use of the shared light table. While the buildings pictured by of Hugo-Brunt, Durack, and White were distant from the audience, the forms of sociality *encouraged* by the analogue slide-lecture are characterised by spatial co-presence and interpersonal connection. While the cliché of the well-travelled professor is codified into these images *encouraging* the familiar narrative of an academic with privileged access to the canonical buildings as the constructor of architectural history, as we argue elsewhere, the contingency of these personal images also *allows* other actors into the frame.[10]

CONCLUSION: SOMETHING LOST | SOMETHING GAINED

With the digital slide-lecture in architecture, we have gained seamless and synthetic multimodality where slide lectures have moved from primarily visual to a multimedia construct. The ease of access to professional architectural photographs, image-centric emphasis of web-based architectural publications, and visual social networking sites all *encourage* downloading and online sharing. At the same time, the additional work needed to scan an image from a book or even to transfer from the memory card of a digital camera *discourages* the inclusion of analogue media. What has been gained in the digital slide-lecture is a kind of ease and immediacy in collection, and the synthetic multimodality afforded by the digital screen and software platforms. What is lost is a direct connection of the presenter from the content of the slide, and the co-presence of a complex local network of embodied actors working together to assemble the slide-lecture.

9   Jennifer F Eisenhauer, "Next Slide Please: The Magical, Scientific, and Corporate Discourses of Visual Projection Technologies," *Studies in Art Education* 47, No. 3 (2006): 211.

10   Philip Goldswain, Mia Kealy, and Mark Sawyer, "Performing the Portmanteau: Slides, plurality, and architectural history in the making", *Charrette* 9, No. 2, (2023): in press.

The dialogic mapping that shows the relationality and formation of the three discursive axes in Mimarlık. Courtesy of the author.

Gizem Özer Özgür (Istanbul Technical University)

Revealing Archives via Dialogic Mapping: Explication of Discourses on Architectural Education in Mimarlık Journal[1]

INTRODUCTION

The discourses on architectural education in Turkey have undergone many changes since World War II. As a sensitive topic with social and political aspects, it is associated with unresolved issues discussed in architectural journals and guided by discursive debates. Especially before the digital era, published media played an important role in shaping architectural discourse, and most architectural journals served as the only platform for textual and visual communication between architects, students, and scholars.

The institutionalisation of architecture through professional associations and the establishment of schools of architecture cannot be separated from the publication of architectural journals, which served as channels of communication between those involved in practise and education. In this context, the archived data of the journals represent both explicit and tacit knowledge, ideas, meanings, and intertextual relationships among a variety of voices, some of which became popular and were widely disseminated while others remained hidden and suppressed during their time.

For all these reasons, archival studies of architectural journals can be an important source of data for understanding the discursive shifts in architectural education, with its causes and effects regarding to time and culture. However, the educational discourse published in architectural journals has been understudied which requires more attention than ever before as they provide a window into our evolving understanding of architectural education.

This study focuses on discursive practises published in *Mimarlık* journal which has been an example of a pioneering architectural journal in Turkey since its first publication in 1963. As the official publication of the Chamber of Architects of Turkey, *Mimarlık* has access to a wide readership, including professionals, academics, and students. Despite the political instability and economic difficulties Turkey has gone through over the years, the journal

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1   This paper is based on the ongoing PhD research conducted under the supervision of Assoc. Prof. Dr. Aslıhan Şenel in Istanbul Technical University.
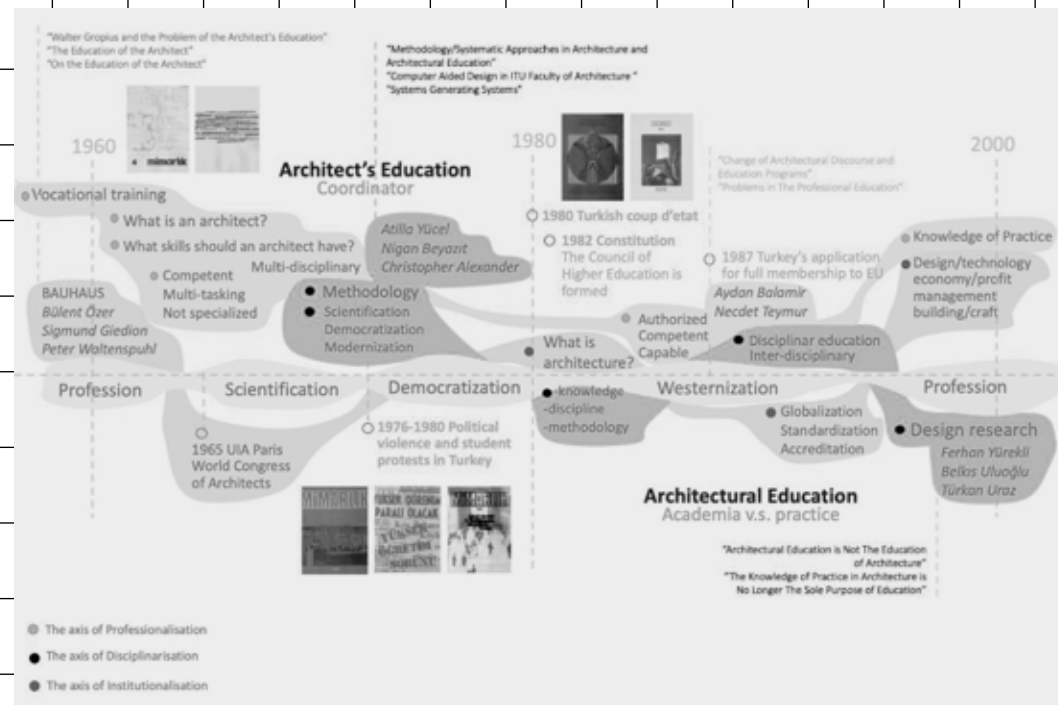
has managed to endure and reach its readers to this day. The archives of the journal offer a rich source of information on the changing landscape of architectural education. This paper is an overview of an ongoing dissertation study searching 296 issues of the journal to examine the evolution of pedagogical discourse through the textual material published in *Mimarlık* between 1963 and 2000. The time period of this research was chosen to capture the most significant changes in architectural education in terms of how they are perceived, represented, problematised, and discussed.

DIALOGIC MAPPING IN ARCHIVAL STUDIES

The challenge of extracting and visualising tacit knowledge from archived data is driving us to innovate the way we collect, sort, and share data, which also creates opportunities to explore and uncover new connections between resources. The evolving relationships between dynamic datasets require 'dialogic mapping', a participatory approach to mapping that emphasises the inclusion of diverse voices. The idea of mapping in this study differs from the traditional contexts of cartography, which, as with maps of geographic or political regions, usually focus on the accuracy and objectivity of the represented geography or any kind of physical appearance. Despite their scientific rigour, however, maps can also be used to represent personal perspectives and serve as a means of interpretation and expression on a particular topic.[2] Dialogic maps are typically created through a process of dialogue and collaboration between the different participants. This process helps to ensure that the map is accurate and representative of all of the different perspectives, unlike diagrams that are often used to show the basic structure or layout of something that can be based on assumptions or inferences. [3]

Dialogic principles borrowed from Bakhtin's theory of dialogism can be applied to the concept of mapping to explore and discuss new participatory mapping strategies in archival studies.[4] This approach can be used to develop an argument on mapping discursive practises that consists of opening, unfolding, and explaining the textual material. Dialogic maps would create an open system for knowledge exchange, allowing for the identification and sharing of new perspectives, tools, and approaches in architectural education among architects, students, faculty, and other decision-makers. By adopting dialogic principles,[5] this study explores

a dynamic, multidisciplinary approach to mapping relations that can be established between discourses and their authors by including diverse voices from different time periods from the journal's archive. Dialogic interrelation refers to the interactions between participants in a dialogic activity, which cannot be limited to linguistic principles alone.[6] Bakhtin argued for this pluralistic understanding of dialogue that emphasises diversity and constant movement. This distinguishes dialogic mapping as a unique method for exploring and understanding complex social systems from actor-network theory (ANT) and hermeneutical analysis, which place a greater emphasis on language and interpretation. Dialogic mapping is a participatory method that focuses on the relationships between human actors and the meaning-making process, in other words, the practical task of mapping relationships using and combining elements of ANT and hermeneutical analysis. By mapping the relationships in their system, participants can identify opportunities for intervention and change. Dialogic maps are not just representations of the phenomenon, but tools for changing the phenomenon.[7]

I believe that the most interesting part of this archival study is to show the relationality between textual materials, rather than treating them as singular and independent acts. In this way, it is possible to identify multiple material-discursive practises that produce arguments about architectural education as professional training, disciplinary action, or institutional practise that are shaped around particular domains of knowledge and power, and to examine how the assumptions that connect the contexts and concerns of discourses on architectural education influence the practise of education as a field of knowledge and activity.

MAPPING THE THREE AXES OF ARCHITECTURAL EDUCATION IN *MIMARLIK*

Deciding on the content of a map requires several preparatory steps that determine the methodology of the mapping process. One of the most important steps is the elimination of certain information, which is necessary to highlight the information that represents the voice of the cartographer. This process inevitably leads to a hegemony of certain concepts, ideas, or visions over suppressed information that is excluded from the content. As with mapping, journals, with their editorial boards and decisions, have the potential to produce suppressive or highly politicised voices in favour of a particular perspective. In the 1970s, for example, many articles and statements[8] authored by editorial board were published in support of

2   John Brian Harley, "Maps, Knowledge, and Power," in *Geographic Thought: a Praxis Perspective*, ed. George Henderson and Marvin Waterstone (New York: Routledge, 2008), 129–148.
3   Alan MacEachren, *How Maps Work: Representation, Visualization, and Design* (New York: The Guilford Press, 1995).
4   Mikhail Mikhailovic Bakhtin, *Speech Genres and Other Late Essays,* trans. Vern W. McGee (Austin: University of Texas Press, 1986), 103–13.
5   Per Linell, *Approaching Dialogue: talk, interaction and contexts in dialogical perspectives*, (Amsterdam/ Philadelphia: John Benjamins Publishing Co., 2001), 67–90. Linell identifies three main principles of Bakhtin's dialogic approach: (1) Sequentiality refers to the sequence of interactive conversations that relate to each other directly or indirectly. (2) Joint construction refers to the fact that dialogue is co-constructed by participants through their coordinated actions and interactions. (3) Act-activity interdependence refers to the fact that actions (or interactions) in discourse are always situated in an

activity (dialogue, encounter) that is jointly produced by the interactants.
6   Per Linell and Ivana Markova, "Acts in discourse: from monological speech acts to dialogical interactions," *Journal for the Theory of Social Behaviour* 23, No. 2 (June 1993): 173–195.
7   Gizem Özer Özgür, "The (re)production of space with a practice of everyday life in the layers of the city Istanbul; The case study of 'Conversation space' Çorlulu Ali Paşa Madrasah", *A|Z Itu Journal Of The Faculty Of Architecture* 15, No. 2, (July 2018): 107–123, https://doi.org/10.5505/itujfa.2018.73693
8   Issues such as No. 69, 87, 94 and 110 especially represent Chamber's political perspective on educational policies of the government focusing on the problems of higher education in Turkey.

the Chamber's political views on government policies to privatise higher education in Turkey. However, the change in editorials over the decades also leads to a change in the oppressive voice by allowing contradictory arguments within the same platform.

Following dialogical principles, this study began with the creation of a reading list of discursive practises on architectural education based on *Mimarlık*'s textual production published in selected years. In order to establish a dialogical relationship between the texts of the journal, all data (titles, keywords, concepts, articulations, etc.) were linked to their socio-political and historical contexts, following the principles of sequentiality, joint-construction, and act-activity interdependence.[9] The three axes that emerged from the selected material are professionalisation (I), disciplinarisation (II), and institutionalisation (III), which are developed in the discourses on architectural education through the changing role of the architect:

Professionalisation: refers to the vocational approaches in architectural education, which sees educational institutions as a tool to train 'coordinating' and 'competent' professionals with a high level of technical knowledge, management skills, and multitasking abilities.

Disciplinarisation: refers to the 'scientification' of the design process and methods in architecture, defining the architect as a multidisciplinary 'researcher' who collects unbiased data and develops rational solutions to specific problems.

Institutionalisation: refers to the process of 'globalisation' and 'standardisation' of the curriculum to meet industry expectations by training 'qualified' and 'authorised' professionals.

To briefly explain these three axes, it is important to note that the first description of the word 'coordinator' and 'competent' in the journal was based on the Western idea of modern architecture.[10] The various versions of this ideal figure have clearly dominated the discourse on architectural education for a long period of time. During this period, critical questions about education have focused on the training of competent architects with the skills necessary to perform adequately and to supervise other professionals in designing and building. Educational discussions along the axis of professionalisation inevitably evolve in accordance with Turkey's sociocultural environment. It can be stated that this definitive role of the architect changed in the 1970s with the widespread disciplinary approaches, the emergence of new disciplines, and the politicisation of the journal under the influence of the student movements of the time.[11] During this period, the discourse on architectural education sought new methods of architectural

design research and attempted to describe architecture in the realm of science, free from personal judgments.[12] After the military coup in 1980, the pace of Turkey's "Westernisation" was supported by its application for full membership in the European Union in 1987, and accordingly, debates about the 'globalisation' and 'standardisation' of architectural education gained popularity in *Mimarlık.*

In the 1990s, the notion of 'training the competent' in conjunction with educating the 'authorised' and 'competent' became one of the main arguments for criticising the current educational agenda. The voice of professional associations dominates the critical discourse, accusing universities of providing inadequate training and incompetent professionals. As a result of this argument, terms such as 'standardisation' and 'accreditation' became widely used in discursive production, institutionalising the discourse of professionalisation.[13]

Throughout the study, the process of critical reading of the articles is followed by coding the titles, wordings, and expressions that convey explicit and hidden messages that show the authors' approach to the problem of education. The 218th issue of *Mimarlık* is one of the thematic issues on 'architectural education' which can be examined to understand dialogical interrelations between discursive practises. In this issue, Aydan Balamir begins her argument in a linear perspective by drawing a comparison between Ecole des Beaux-Arts and Bauhaus, highlighting the two different approaches in the history of institutional education.[14] According to the author, Ecole des Beaux-Arts represents the traditional master-apprentice relationship in education that considers architectural education as a part of professional training, while Bauhaus represents an educational model that breaks away from the traditional ideas and formations and emphasises on creative productivity. She explains these shifts in the context of other social aspects that affect the discursive transformation of the architect's role. In the same issue, Necdet Teymur makes another comparison, between two different perspectives on architectural education that are represented by profession and the university. He points out the differences between architectural practise and education in terms of their goals and priorities.[15] From a dialogical perspective, these two separate articles can be viewed in a dialogical relationship. Their arguments and approaches may differ, but together they construct a dialogue that highlights the tensions between two institutional voices: professionalisation and disciplinarisation.

Reviewing *Mimarlık*, it becomes clear that as the role of the architect changes over the years, the discourse on education have eventually adapted to the new positions of the profession. The roles, tasks, and goals describing

9   Linell, *Approaching Dialogue: talk, interaction and contexts in dialogical perspectives,* 69.
10   Siegfrid Giedion, "Mimarın Eğitimi Üzerine," trans. Yıldız Sey, *Mimarlık* 10, No. 4 (April 1964): 12–13.
11   Christopher Alexander, "Sistemler Üreten Sistemler," *Mimarlık* 114, No. 4 (April 1973): 29–31; Atilla Yücel, "Mimarlıkta Metodoloji/Sistemli Yaklaşımlar ve Mimarlık Eğitimi," *Mimarlık* 114, No. 4 (April 1973): 22–28.

12   Murat Nişancıoğlu, Süha Özkan, and Mete Turan, "Mimarlık Eğitiminde Çağdaşlaşma Demokratikleşme ve Bilimselleşme Koşutunda Olacaktır," *Mimarlık* 155, No. 2 (February 1978): 26–28.
13   Feyyaz Erpi, "Nasıl Bir Mimarlık Eğitimi?," *Mimarlık* 264, No. 4 (July 1995): 17–18; Orhan Hacıhasanoğlu, "Mimarlık Eğitimi ve Forumu," *Mimarlık* 264, No. 4 (July 1995): 15–16.
14   Aydan Balamir, "Mimarlık Söyleminin Değişimi ve Eğitim Programları," *Mimarlık* 218, No. 8 (1985): 9–15.
15   Necdet Teymur, "Mesleki Eğitimde Sorunlar," *Mimarlık* 218, No. 8 (1985): 18–19.

the profession through the discursive practises change from 'multi-tasking' and 'coordinator' identity in the 1960s to a rational scientific figure of a 'specific discipline' in the 1970s. After the first years of the 1980s, the 'competent' multitasking figure with interdisciplinary working skills returns to the arguments, leaving its leading, coordinating role behind. Now the new tasks of architecture are no longer determined by the social priorities and the unique skills of the architect, but the new dynamics of the global economy. The transforming definition of competence and rationality into professionalisation, introducing new global standards into institutions of education and profession.

FINAL REMARKS

Overall, it is important to note that the process of dialogical mapping characterised by discursive practises is based on a participatory process of discourse production that involves reference dependence and sequential occurrence. This shows us how a connection is made between the discourses and the sociocultural environment, and helps us to present the dialogical relations of discursive practises on architectural education.

Architectural journals are extremely important archival sources for understanding the transformation of architectural education in relation to various socio-political aspects that shape the role of the architect in society. However, in the search for new approaches to education, the interrelationship between different archival studies is still very limited to paint the overall picture of architectural education. The dialogic mapping approach can be adapted to emerging digital technologies to promote participatory mapping strategies in archival studies. Structuring interactive open systems to visualise and verbalise complex datasets can help us share our insights and explore new perspectives for the future of architectural education. In this way, I believe, future researchers can participate in exploring the unmarked voices within the exponential possibilities of dialogic access to archival data. There is no question that the changes that will occur in education can reflect the crucial insights of sociological, cultural, and theoretical research. In this sense, remembering the ethical position of architecture is important to rethink the mission and vision of architectural education.

Screenshot of BiDiRIA, a prototypical database of Italian architectural journals.

Federico Deambrosis, Andrea Gritti, and Luka Skansi (Politecnico di Milano)

Journals as Maps: Reconsidering BiDiRIA

BiDiRIA

Developed in one semester in the second half of 2021 within the departments of Architecture and Urban Studies and of Electronics, Information and Bioengineering of the Politecnico di Milano, the BiDiRIA (Towards a Digital Library of Italian Architectural Periodicals) project aimed to verify the possibility and potential of a new retrospective approach to 20th-century design-centred journals.[1]

At the time the call for projects was launched, Italy was experiencing one of the most critical peaks of the last pandemic and a rigorous lockdown: teaching was only taking place in distance mode and libraries and archives were inaccessible. In these conditions, the gap between the rare initiatives of digital sharing of periodicals and, more generally, of knowledge undertaken in our country and some foreign experiences (above all, the Swiss portal *e-periodica*, but also important French cases such as *Gallica* and the digital library of the Cité de l'Architecture, to mention only to the contexts geographically closest to us) was particularly evident. This worked as a stimulus.

Funded by the Italian Ministry of Research through a competitive call aimed more at the hard sciences than the humanities, the project was required to produce a prototype to be developed in an eventual second phase.[2]

This prototype consists of a query system through which different searches can be made on a database grouping the issues of seven different Italian periodicals published in 1959. These are *Casabella continuità*, possibly the most celebrated postwar Italian architectural journal that resumed its activity at the end of 1953 under the direction of Ernesto Rogers, *L'architettura: cronache e storia,* founded in 1955 and directed by Bruno Zevi, *La casa. Quaderni di architettura e critica*, a lesser-known journal founded that same year and directed by the Roman architects Pio Montesi and Paolo Portoghesi, *Edilizia Moderna*, *Zodiac*, a journal promoted, since 1957, by Adriano Olivetti, *Urbanistica,* the organ of the National Institute of Urban Planning and, finally, *Civiltà delle Macchine*, founded in 1953 by Leonardo Sinisgalli and supported by the Institute for the Industrial Reconstruction.

1   The research team includes Federico Deambrosis (PI), Andrea Gritti and Luka Skansi from DAStU, Piero Fraternali and Federico Milan from DEIB. Marco Voltini, Pierfrancesco Sacerdoti, Federica Deo, Michele Porcelluzzi and Vittoria De Franceschini collaborated to the project.

2   Call "MIUR FISR 2020 Emergenza Covid-19", decree DD nr. 562 of May 5, 2020. The fact that, almost two years after the conclusion of the project, there is no news of the evaluation of the first phase and the projects funded for the second, could be the subject of further reflection.

As an informed observer will realise at first glance, this is a heterogeneous sample, made up of well-known and almost forgotten journals differing in their periodicity, target audience, subjects, style, and manner of communication. Equally glaring are some absences, starting with *Domus*, which we excluded in this phase as it is perhaps the only Italian architectural periodical with a digital archive accessible via the web, albeit rather conventional in its search methods.[3]

Due to the short time available to us, we concentrated the prototype on a single year: 1959. At the height of the so-called economic boom, Italian architecture appears in one of its heydays and the scene of architectural periodicals is extremely vibrant.

Therefore, BiDiRIA stands out as a dual observatory. On the one hand, it aims to study architecture and its evolutions and hybridisations through the traces left on the pages of periodicals; on the other, it is also extremely interested in journals as autonomous objects, themselves the outcome of design thoughts.

THE MACHINERY

The construction of the prototype started, of course, with the digitisation of the issues of the diverse journals. Each article or, more precisely, each item (considering by this term also the editorials, news, reviews and the other kind of columns that populated the periodicals of those years) corresponds to a file. Journals were thus exploded: the logic that guided the construction of the indexes or structured monographic issues is now barely intelligible. In fact, each item is visualised as a dot, feeding the cloud of articles originally published in the seven different journals in the semester of reference. Each dot contains a link to a copy of the article, which can then be quickly displayed and, in theory, by moving the cursor from one dot to the next, it would even be possible to browse through a single issue in its entirety. But these dots change colour, from dark blue to light purple, if the referring item meets the requirements that can be set in the right-hand column.

Therefore, BiDiRIA makes it possible not only to browse through single periodicals from remote but also to use them as a map of the architectural discourse. This kind of map is reliable to the extent that subjective elements are minimised by a selection of journals of different orientations and approaches. In other words, it also provides quantitative elements such as the number of references to the production of a given foreign country, the space granted to residential architecture in relation to public or production spaces, rather than the relationship between buildings made of wood or reinforced concrete. Obviously, it is also possible to use the prototype to map the fortunes of individual designers or the consistency of the work of individual authors.

3   See: https://archive.domusweb.it/detail/publication/414.

The criteria we have introduced in the query column are as follows.

'Journal' allows to focus on a single periodical, excluding the others.

'Category' deals with the different kinds of contents journals are made of: 'projects', 'opinions', 'essays', 'reviews', 'news', 'columns', 'art' and 'other'. Some of them open a second level of query: it is possible to search for built or unbuilt projects, essays can be historical or of another kind.

'Authors', 'Designer/Artist' and 'Geography' are obvious.

'Function' allows to select one of the following ones: 'commercial', 'product design', 'institutional buildings', 'exhibitions', 'workspaces', 'mobility', 'leisure', 'residence', 'facilities', 'urban spaces'; facilities are further divided into different categories (administration, cult, culture, education, restaurants & hotels, health, others).

'Scale' is perhaps a less common and conventional criterion. From the bigger to the smaller, we used 'XL' for planning, 'L' for urban design, 'M' is the scale of buildings, 'S' is that of interiors, 'XS' is used for objects, furniture, and details.

The following criteria, 'building types' and 'building elements', proved to be problematic. In many cases, the role of the compiler is hard because the characteristics of the buildings or projects described are, with respect to these categories, difficult to define and often ambiguous. In fact, if most of the time a bridge or a city plan are easy to identify and define, categories such as 'multi-storey building' can be applied to very different cases lacking therefore precision, if not sense. Similar situations can occur when one focuses on building materials and techniques. On the other hand, these criteria allow the more proper architectural aspects of the discourse to be explored in depth and represent perhaps the most challenging frontier.

In this first phase, a series of types were identified and the eighth criterion focused on the building materials and construction techniques adopted. The ninth and final criterion concerns representation, indicating the typologies (photographs, technical drawings, models, photomontages, maps, historical maps and graphs) used in each article.

Each search highlights chromatically a sample that meets the criteria introduced; within this, it is possible, by moving the cursor, to receive information on each article and, eventually, to visualise it.

OPEN ISSUES

Even from the succinct and somewhat cold description we have proposed, it will probably have become clear that the content of the journals we have analysed offers a kind of resistance and adds much to the traditional cataloguing based on pre-established categories. The analytical tension

and synthetic requirement that underlie this project are difficult to bring to a satisfactory mediation. When the former prevails, the categories become many in number, articulated in multiple levels, pursuing a complexity that they, still, will not be able to reach. The second, on the other hand, implies a level of simplification that seems inadequate, if not mortifying, to describe an extraordinarily articulated series of experiences and projects.

Facing this seemingly insoluble, but only mediatable and recalibratable alternative through trials and errors, the project, also on the basis of past experience,[4] has constantly been reasoning about a sharable and exportable data storage and cataloguing system.[5]

It is evident how few steps have been taken to date in defining Thesauri related to design culture. This observation is valid at the international level, where, for example, the Avery Index proposes five document types, some twenty features referring to iconography and almost fifty languages but entrusts the development of further investigations to free research, possibly correlating two entries according to logical AND, OR, or NOT relations. Also, on a national and regional level, databases such as 'Archinet' and the European network 'Urbadoc' allow queries by title, subject, authors, and places, delegating, in fact, the majority of topics to the free search, which is also the only modality used by important private initiatives such as the digital archive of *Domus* mentioned above.

Free research is thus generally entrusted with the task of compensating for the gaps and rigidities implicit in any Thesaurus. This irreplaceable role of correction and integration, usually developed with OCR systems, could be preceded, upstream of the full-text access, by a system of querying and displaying quantitative data relating to the variation, over time and in different geographical contexts, of basic indicators. In this sense, the prototype provides its users with maps capable of spatialising data deduced from a codified and integrated query system.

Moreover, the reasons for the interest in architectural periodicals, among the most authentic expressions of the zeitgeist of those years, largely transcend the content sphere. They in fact also concern the tools and forms through which contents and messages are conveyed.

HORIZONS

BiDiRIA is also a place for the incubation of hypotheses and alternatives that, even when not immediately applied to the prototype, take on value as perspectives.

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4   See: http://atlante.iuav.it/index.php.
5   A key step in this reflection was the internal workshop held on 26 November 2021 at the Historical Library of the Politecnico di Milano, which was attended, among others, by Angela Windholz and Elisabetta Zonca from the Library of the Academy of Architecture in Mendrisio.

Journals are the product of a large but controllable number of actors who intervene in the creative and production process with different roles and intensities (directors, editors, correspondents, stable or occasional collaborators). In the case of architecture journals, actors configure a network that proposes multiple entanglements between one title and another and is articulated in a second level, referring to designers. Not infrequently, these levels contaminate each other, and architects published as designers in one journal reappear as authors in the same or another in multiple cross-references not unrelated to mutual promotion and censure. This 'social' look at magazines will be developed from some pioneering experiences, such as the "Global Journals Portal", which has dedicated one of its five sections to the 'Actors' network'.[6]

A broadened look at architectural periodicals makes it possible to map the epicentres of architectural practice and debate and their variation over time, making it possible to localise the geographical location of the content of the journals. Thus, alongside taken-for-granted centralities (Milan and Rome above all), unexpected polarities emerge that for different reasons (patronage, individual designers, public programmes, disaster reconstruction programmes, etc.) assert themselves on the national scene, at least for a season. At the same time, journals provide a precise indication of the international references of the Italian debate, recording how the attention along given geographical lines varies over time and by which interests and reasons it is driven. These observations will result in various maps, also animated, visualising the geographical implications at very different scales, from the local to the global.

The journals we have considered are structured by strongly hierarchical indexes containing differentiated but recurring elements. These settings that distinguish or unite one journal from another are reflected almost linearly in the graphic cages that organise the contents of the different pages and their reciprocal relationships. An in-depth project on periodicals cannot disregard this 'structural' vision, the study of which will benefit from the analytical tools and visualisations with which the digital humanities will endow it. This interest in the journal as an object, in the rules and criteria that determine and distinguish it, can be focused on specific aspects.

It is, for instance, conceivable that the development of the prototype will be characterised by the use of lexicometry tools to corroborate the results of the queries with analytical indexes, word clouds, data capable of highlighting hapax and recurring terms, or rather to analyse semantic units. In particular, diagrams can be automatically extracted from the index repertoire, which can help the user to refine or reorient the interrogation systems of the digitised sample.

The prototype was constructed using the so-called facet classification. Each individual item was classified on the basis of a set of criteria, splitting

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6   See: https://sismo.inha.fr/s/en/page/welcome.

it into a set of properties that allow it to be included or excluded from the result of a specific query. The query interface allows the selection of the characteristics of interest (facets). The selection corresponds to the display of the subset of contents (typically pages) that satisfy the highlighted selection criterion within the entire corpus of the digital collection. A further interaction allows the display of the details of each result, thus enabling the individual element and the whole that makes up the query response to be controlled. Future developments include the design of digitisation, querying and consultation modes that go beyond structured metadata and faceted searching. The idea is to realise computer vision components based on convolutional neural networks capable of extracting and indexing also structural, compositional and graphic elements of the page to enable innovative forms of querying that also exploit information such as the position of textual and iconographic components on the page, the style of composition, the use of specific fonts or compositional formats.

Abkürzung: KWGK   Art des Projektes: Objekt (wettbewerb,)

Bezeichnung: Kaiser-Wilhelm-Gedächtniskirche

Ort: Berlin, Breitscheidplatz

Entwurf: Eiermann, Egon (Hilgers will ~~soll~~ nicht genannt werden !)

Bauherr/Auslober:

Zeit der Planung: 1958 - 64

Bauzeit:

Planverzeichnis IB: KWGK/I, KWGK/II, KWGK/III, KWGK/IV, KWGK/V

Fotoverzeichnis IB:

Verzeichnis schriftlicher Nachlaß IB:

Literatur:

The index card accompanying the Egon Eiermann estate describing the competition materials of the Kaiser-Wilhelm-Gedächtniskirche, Berlin. Photo by Mechthild Ebert, saai archive for architecture and engineering, KIT Karlsruhe.

Mechthild Ebert (KIT/saai Karlsruhe)
and Anna-Maria Meister (KHI, Max Planck Institute, KIT/saai Karlsruhe)

The Powers of Metadata: Stories of Archival Knowledge Constructions

WHO ~~SHOULD~~ WANTS TO BE IN THE ARCHIVE?

In the holdings of the saai, the archive for architecture and engineering at the Karlsruhe Institute of Technology, a seemingly innocuous index card accompanying the Eiermann estate holds the data of an architectural design competition. An index card like many of its kind, used in the 19th century format of the categorisation of universal knowledge, used for later generations of scholars to sort through the archives of German architect Egon Eiermann, or simply used to capture metadata. The object in question — no less than the Kaiser-Wilhelm-Gedächtniskirche in Berlin — became one of Eiermann's most famous buildings, a symbol of post-WWII Germany, site of several political events, an annual Christmas market and, not so long ago, of a deadly attack. On its index card, the third line in the metadata field for the object after name and place is design (Entwurf). Design here describes neither the shape nor form of the architectural structure, but demarcates its creator. At least that is how this index card presents its information: Egon Eiermann is named as the sole author. And yet, we find another name on the card in close proximity: that of his long-term office partner Robert Hilgers, namely in the added reasoning behind Eiermann's name. In brackets someone typed that 'Hilgers should not be named', and, maybe someone else, maybe the same person, crossed out the 'should' by hand and replaced it with 'does not want' in blue on top of it: 'Hilgers ~~soll~~ will nicht genannt werden'.

This text explores the tension held in these layered deletions and additions of information both temporally and indexically: it dives into the space between them. From someone who 'should' not be named to personal decisions playing into a posterior not-wanting-to-be-named narrative. Who recorded which name at which point in time with what kind of intention, manipulation or framing is precisely where archival knowledge is written, recorded, confirmed, changed and interpreted — forming, ultimately, a palimpsest of (sometimes fragile) 'facts' preserved in the saai database.

If one were to browse the entire catalogue of the saai — one of the largest architectural collections in Germany with estates from Frei Otto, Rolf Gutbrod and Günter Behnisch, to name the best known — one would find works from over 200 offices and architects. They would be sorted by name, referenced by material and medium, size and date, catalogued according to pre-defined categories and stored for future visitors. One would *not* find

many women, their practices, or spaces for or by marginalised groups or diverse practices. As many institutionalised archives in the Western world, this speaks to the long-standing conventions of a discipline constructed through so-called canonical figures — and their oeuvre. But the metadata of the archival catalogue does not consist of objective, stable categories. Hence what this text wants to explore are the powers of metadata as verb: the active usage of archival methods and techniques to uncover how histories are lost, and how to write alternative ones through them.

THE CASE OF ROBERT HILGERS
(OF LOST OFFICE PARTNERS AND HIDDEN COLLABORATORS)

One would discover office partners removed, hidden in or dropped from estates, such as aforementioned Robert Hilgers, whose partnership with Eiermann does not appear in the posterior presentation of Eiermann's projects. Partners or collaborators are marked temporarily on drafts or caught on camera, mentioned in letters or on office letterheads, but never make it into the metadata of the estate, despite their significant contribution to the office (and its success). Hilgers was Eiermann's office partner from 1946 to 1966, a period where the office worked on more than 100 projects, and contemporaneous publications sometimes list Hilgers using the wording 'Egon Eiermann with [mit] Robert Hilgers'. Following Eiermann's death in 1970, a contract between his joint heirs and Hilgers names the latter explicitly as co-author, even if not for all the projects (one exception being for example the estate's furniture). Similarly, there never was any doubt that the German Pavilion for the 1958 World Exhibition in Brussels was a joint project of Eiermann and Sep Ruf — and yet, the project is solely filed under Eiermann's estate and name.

The transferred collection is often referred to in documents as the 'Nachlaß [Estate] Egon Eiermann'. Subsequently, the objects were roughly arranged for the first time, recorded, and in some cases given a stamp of the Institute for Architectural History (Institut für Baugeschichte). Each project known at the time was given an index card in which various basic data such as location, project name, abbreviation and design were recorded. These index cards were supplemented by a project list signed by both Hilgers and the representative of the joint heirs of Eiermann in 1975, naming multiple designers of a large part of the projects.

But the emphasis on the 'oeuvre' of a single architect as governing principle for the saai's archival structure proved pervasive: signatures — a fairly permanent attribute of an archival object — were assigned, where the names of the architects and offices are used to create a maximum five-digit sequence of letters. 'EE' stands for Egon Eiermann (or, as another example, 'BuP' stands for 'Behnisch und Partner'). The donation contract as 'Werkarchiv' further enforces the idea that the production of an architect is always a 'Werk' (oeuvre), replacing the earlier used denominator 'Nachlaß'. The term 'Werkarchiv Egon Eiermann' is also imprecise regarding the actual archived

objects: it includes objects that were handed over after 1974 by Hilgers, Rudolf Büchner, Immo Boyken or Brigitte Eiermann and contains joint projects with Ruf, Fritz Jaenecke, Hilgers, and posthumous projects. Despite these complex genealogies, the denomination in the archival records and their digital entries reinforces the impression within (and from) the archive of Eiermann as the sole author of these projects.

THE CASE OF MARIA VERENA GIESELMANN
(OF WIVES AND DAUGHTERS)

Maria Verena Gieselmann (née Fischer), is one of the few women represented in the saai with their own estate. Looking more closely, however, one will find that her estate consists only of a few documents (a diary, a photo album and correspondence) despite Gieselmann's profile as international and independent architect. Her materials in the saai stem largely from a scholarship in the beginning of the 1950's, when she travelled to the US to participate in the 'Women's Affairs Program', a program sponsored by the Women's Bureau of the U.S. Department of Labour. Additionally, in 1957, she was noticeably not merely in an office partnership with her father Alfred Fischer and Reinhard Gieselmann, her husband, but was an experienced freelance architect in Karlsruhe.

Her estate however holds no record of her own architectural activities. Taking a look at the estate of her father reveals projects she worked on with him and her husband in a photo album both gifted to him on his 75th birthday, which consists largely of photos showing completed projects. The name of the project, the date of completion or the planning and construction period and, if existing, the co-authors are written on narrow, typewritten strips of paper. Only when looking more closely it is revealed that several of these projects filed in the estate of her father in a photo album (an object associated with private life rather than professional achievement) are the very projects during Gieselmann's time as a freelance architect — projects missing from the records of her own estate. Similarly, the records of her husband's estate are already much more extensive than Gieselmann's own despite being not yet fully inventoried — not least because it holds all their collaborative projects. The size and volume of *his* estate demonstrates the overwriting process of archive sorting logics and historical bias toward the male partner as author. Both, archiving and documenting, pushed her work into the fringes, the private, the domestic, thereby suppressing volume and visibility of her production as an architect. And the archival logic confirmed these hegemonies: the difference in texture and composition of estates by women requires a difference in their archival handling and processing. In reality the structures and infrastructures of archival processes reproduce existing archival hegemonies, as historically, archives were conceived and built with the male estate and 'oeuvre' as mold.

OTHER ARCHIVES ARE POSSIBLE
(OF METADATA ACTIVISM OR CONSERVATIVE CANONISATION)

While new structures and categorisations are urgently needed, the question of how to reevaluate the existing metadata of the archive requires operations on a different plane altogether. Retrospectively changing already assigned or existing signatures cannot be the solution, but expanding metadata to be recorded might be a powerful tool with lasting impact: one that might be employed in the course of large digitisation projects such as the one at saai for the digital catalogue of Egon Eiermann's work. By drawing together and cross-analysing collections and convolutes against the dictum of the personal (male) estate, this text argues that it is by utilising the powers of metadata that one can create, write and shape other, more inclusive archival structures for alternative architecture histories. On the one hand, there is the possibility of naming the authors of the objects (plans, photos, etc.), on the other hand, the architects or the office, in order to present an alternative narrative than that of the individual genius figure. Since, if not recorded consistently in the metadata, especially supporting actors (some with, as it turns out, a starring role) start disappearing from historical narratives—or never make it into them in the first place.

In a feminist tradition of building upon existing structures our work in the saai wants to investigate steps that can be taken not to undo the archive entirely, but to intentionally annotate it with more diverse voices. Rather than simply switching the collecting strategy from one figure to a substitute, we want to test out Donna Haraway's argument for diversification and differentiation building on the existing structures in *Cyborg Manifesto*.[1] And yet, the question of how one can write other histories from a German (formerly male-run) archive within a Technical University by subversively and productively working from within the logics of the archive is not a trivial pursuit. How is one to mobilise archival activism in the intricate and paralysing bureaucracies of public institutions?

Following Achile Mbembe, one might have to concede that archives are always 'fundamentally a matter of discrimination and selection, which, in the end, results in the granting of a privileged status to certain written documents, and the refusal of that same status to others'.[2] And it is the space in archives and institutions that is contested territory—literally so when archivists negotiate how to select (supposedly) worthy material. Much has been written recently on the question of permanence in relation to history, and the discriminatory nature of historiography as favourable to those with the privilege to build, maintain, or monumentalise.[3] This goes

for peoples as it does for individuals, and it solidifies in the archive. The giving space to others—here exemplified on paper by literally giving the space to Eiermann over Hilgers—is both the task and the challenge of architectural archives built over centuries, dominated by canonising Western value regimes.

If one considers the necessary restructuring of architectural knowledge —and, therefore, a different way to write and preserve and construct its histories—one must question seemingly stable categories which have been stalwarts. If an estate of an architecture office (already the first two assumptions: the estate and the office) is offered to an archive such as the saai, it is presented as a project list, rolls and rolls of plans, architectural models and several folders with correspondence. Then the spatial negotiation begins: what can be taken on, what needs to be left out. One can imagine that objects such as textile knits or fragile craftwork have long been not categorised as things worthy of archival treatment. And yet, recent histories have shown how essential precisely the histories of seemingly marginal and non-architectural making and creating are for a more diverse and deeper understanding of architecture and its histories—and, not least, its protagonists.[4] Boxes of unidentifiable, unsorted postcards or Xerox copies are still prone to being discarded to make space in the archive for 'proper' architectural archives like models, plans, or sketchbooks—even though they might entail different methods and modes of thinking about and creating architecture. When architecture historian S.E. Eisterer writes about Margarete Schütte-Lihotzky's time as architect in the resistance against the Nazi regime, for example, she unravels the history of a series of small knitted slippers (crafted in prison) alongside conventional archival methods; and yet most archives would still dismiss non-architectural objects from a list handed over by the donors or their heirs.[5] When architecture historian Min Kyung Lee writes about Korean wigs in a shop in the United States, what she really constructs is the architectural space of a migrant community. When objects found in the Mediterranean are treated like archival objects at the Kunsthistorisches Institut in Florenz, the logic of what must be preserved shifts; and when Arjit Sen writes about a street in Chicago, he writes about a group of space makers that were not trained and never afforded the space or means to erect monuments or collect files.[6]

(Ann Arbor: University of Michigan Press, 2010); Gracen Brilmyer, "Archival Assemblages: Applying Disability Studies' Political/Relational Model to Archival Description," *Archival Science* 18, No. 2 (June 2018): 95–118; Ann Laura Stoler, *Imperial Debris: On Ruins and Ruination* (Durham: Duke UP, 2013).

4   Alla Vronskaya, "The Work of Perchanush Msryan-Oksuzyan—Women Building Socialism: Female Architects of the Socialist World," August 5, 2022, https://womenbuildingsocialism.org/the-work-of-perchanush-msryan-oksuzyan/; Donna Haraway, "Situated Knowledges: The Science Question in Feminism and the Privilege of Partial Perspective," *Feminist Studies* 14, No. 3 (1988); Tarez Samra Graban, "From Location(s) to Locatability: Mapping Feminist Recovery and Archival Activity through Metadata," *College English* 76, No. 2 (2013): 171–93.

5   S. E. Eisterer, "Spatial Practices of Dissidence: Identity, Fragmentary Archives, and the Austrian Resistance in Exile, 1938–1945," *Aggregate* 10 (2022), https://doi.org/10.53965/DCMI2133.

6   Min Kyung Lee presented her work in progress in a seminar lecture on May 4, 2023 at KIT and Kassel University. For the latter example, see Arjit Sen, "Viewpoint: Spatial Ethnography of Devon Avenue, Chicago" in *Buildings & Landscapes: Journal of the Vernacular Architecture Forum*, Volume 28, Number 2, Fall 2021, 3–24; Massimo Ricciardo, Costanza Caraffa, and Almut Goldhahn, eds., *Encounters in an archive: objects of migration* (Foligno, Firenze: Viaindustriae publishing Kunsthistorisches Institut in Florenz—Max-Planck-Institut, 2023).

1   Donna Jeanne Haraway, "A Cyborg Manifesto: Science, Technology, and Socialist-Feminism in the Late Twentieth Century" in *Simians, Cyborgs and Women: The Reinvention of* Nature (London: Routledge, 1991).

2   Achile Mbembe, "The Power of the Archive and its Limits" in *Refiguring the Archive*, ed. Carolyn Hamilton, Verne Harris, Jane Taylor, Michele Pickover, Graeme Reid and Razia Saleh, (Dordrecht: Springer Science+Business Media, 2002), 20, originally puplished by Kluwer Academic Publisher in 2002.

3   See among others Cathrine Bublatzky and Fiona Siegenthaler, *(Un)Sighted Archives of Migration: Spaces of Encounter and Resistance*, 2023); *On Alinari: Archive in Transition* (Milan: a+mbookstore, 2021); Francis X. Blouin, *Archives, Documentation and the Institutions of Social Memory: Essays from the Sawyer Seminar*,

But what about the space that needs to be preserved for knowledge yet to come, for documents destroyed, for figures that never held a place in the index? Can one think of a redistribution of space not just for past figures that may slowly reclaim their place, but for a future archive configured of different kinds of knowledge altogether? After all, one might wonder who is the one holding the blue pen deciding who 'wants' to be named in the archive and who does not — and whether that pen should finally be passed on to write other entries and different histories. Just as we must strive toward the diversification of themes, materials, people and narratives documented in the archive, we propose to diversify the logics of the archive itself. If archives should contain not one but several layered histories held in one estate, and if they should allow the uncovering of buried figures and stories, then the metadata can no longer come from just one source, be it the donor or the archivist. Accordingly, the pen should not only be passed on to another person, but the writing of metadata should become a collective practice, the procedures of which need to be transparent and accessible. How such an ambition can take form in the archival processing is one of the tasks archives (and archivists) must ask of future database developers, AI processes and, not least, of themselves. Indeed, what may really need to change is not just the metadata logged to the objects, but the striving for permanence (even if for a more inclusive one) — instead opening up new avenues of fragile constructions of shifting knowledges.

Architect Barbie on a visit to the Az W Cold Storage, nodes of knowledge. Still from the video installation: *Hot Questions—Cold Storage*, The Permanent Exhibition at the Architekturzentrum Wien, 2022.

Monika Platzer and Iris Ranzinger (Architekturzentrum Wien)

'Az W Collection Online Meets the Encyclopaedia of Architects': Our Kickoff Project to Something Larger

Like many of the European architecture museums, the Architekturzentrum Wien (Az W) is nationally oriented in terms of its collection activity. The guiding question in the work of the Az W–'What can architecture do?'—is also the underlying question of the new permanent exhibition *Hot Questions. Cold Storage*, which we broadened by asking 'What can collections accomplish?'. Our collection policy and curatorial approach focus not on style or mastership, but on the social dimension of architecture; that is to say, on the answers architecture is able to give to questions concerning society, culture, and the planet.

RE-ASSEMBLING HISTORIES AND COLLECTIONS

As head of collections and curator together with the team we constantly shift between the following work environments: acquisitions, research and exhibitions. This multi- perspective approach shapes our way of thinking about the discipline, narratives and the collection. One of our main concerns is to open up the collection from a present-day standpoint. In this context, it is important to be aware of the ongoing criticism within the humanities to interpret the past through the lens of the present. *Präsentismus or Presentism* is made responsible for the declining interest in topics prior to the 20th century resulting in a limited view of history.[1]

Yet, we also recognise the benefits between the dynamic encounter of the present and the past and understand collections as materialised histories that play an important role as a civic resource in an increasingly politically charged environment. We do not see ourselves as neutral observers, quite the contrary, we want to bring socio-political standpoints to the discussion with our audiences. For us, the collection serves as a set of distribution nodes so to speak, from which we depart to question the past, present, and future. Against this background, the name of our permanent exhibition *Hot Questions. Cold Storage*[2] was born. Seven Hot Questions were formulated

1   Lynn Hunt, *Against Presentism*, May 1, 2002; (https://www.historians.org/research-and-publications/perspectives-on-history/may-2002/against-presentism) James H. Sweet, Is History History? Identity Politics and Teleologies of the Present. Aug 17, 2022 (https://www.historians.org/research-and-publications/perspectives-on-history/september-2022/is-history-history-identity-politics-and-teleologies-of-the-present)
2   Angelika Fitz, Monika Platzer, Architekturzentrum Wien, ed. *Hot Questions Cold Storage. Architecture from Austria. The Permanent Exhibition at the Az W* (Zürich: Park Books, 2023).

to serve as a discourse generator for many wide-ranging inquiries into the collection and breathe life into our depots, the so-called Cold Storage.[3]

Exhibitions are instruments of power and provide an important contribution to the global spread of architectural ideas and images. In general, permanent exhibitions are exclusively fed from the collection which have their limits, since collections are always fragmentary with gaps and inconsistencies. At the same time, they help to construct a master narrative, which solidifies into the canon. We wanted to challenge our collection from today's perspective in order to trace transnational as well as overlooked facets, and we wanted to brush the familiar against the grain. Our strategy was to move away from the classical object presentation and to leave the trodden path of chronology. Instead of a linear narrative, our storytelling shifts back and forth in time and shows the intertwining of architecture with social and political concepts. Whenever we needed to strengthen an argument, materials from other collections were added.

For instance, in our section 'Who shapes the City?' — where we talk about the dependencies of migration, politics and the growth of the city — we included a project by Otto Wagner and identify the interrelation between Wagner's work and his close political affinity with the antisemitism of the Christian Social Party. The emancipation of the Jews in Austria in the late 19th century raised hostile sentiments among contemporaries. Wagner increasingly invoked negative antisemitic stereotypes in his diaries, which were directly related to his dissatisfaction with market mechanisms which influenced the sale or construction of his buildings.

BECOMING FEMALE AND RE-FRAMING THE CANON

To date there is still a strong imbalance in terms of gender diversity in our holdings. From about 100 archives only three of them are archives from women. This lead us back to one of the Hot Questions raised in our permanent exhibition 'Who is involved?' which we followed up with a quote 'Why have there been no great women architects?' which paraphrases the title of Linda Nochlin's 1971 essay *Why Have There Been No Great Women Artists*? In her text Nochlin explores the structural — as opposed to the individual — discrimination in the Western art system, an analysis which can be carried over to architecture. In this section of the exhibition, we assess the four educational institutions in Vienna, which reveals the systemic disadvantages women architects faced thus exposing the discrimination that has had a lasting effect when, for example, it comes to appoint a new full professor.[4] It was not until 1996 when Nasrine Seraji was named as the first female full professor at Vienna's Academy of Fine Arts (1996–2001).

3 Who shapes the city? Who gets involved? How is architecture produced? Who provides for us? How can we survive? Who are we? How do we want to live?
4 The K. k. Kunstgewerbeschule (Arts and Crafts School Vienna) was the first school in Austria where women were allowed to enroll 1873 in architecture. At the Technische Hochschule [Technical College] in Vienna and the Academy of Fine Arts on Vienna it took till 1919 and 1920/21 till women were accepeted.

It's by now evidently clear that women architects have been written out of history in the absence of adequate sources about their work. Not only did structural inequalities minimise their professional opportunities, but a professional practice prevailed in which only those women received recognition whose architectural oeuvres were equal in size to those of their male colleagues. In light of the general social inequalities women faced, and the tendency of women architects to relocate across national borders due to educational and professional opportunities, we must develop new approaches to collecting artefacts and information about their work. For instance, what happened to the more than 200 women enrolled in Austrian educational institutions before 1938? In order to make these women architects visible we lauchend a research project in 2021, in cooperation with the Margarete Schütte-Lihotzky Center, entitled 'Female Pioneers of Architecture in Vienna'. The results will be incorporated into our project 'Az W Collection online meets the Encyclopaedia of Architects' and will subsequently lead to an expansion of the canon.

THE CULTURAL POLITICAL BACKDROP

Like most cultural institutions, we operate within the scientific policies of our countries and Europe. Since 2001, Austria has been actively promoting the digitisation of its cultural heritage in order to make it available via the European platform Europeana.[5] As a museum which is not operated by the state or city but by a private association, the Az W has had only limited access to fundings. This is also one of the reasons why the Az W still does not have an online collection database and why the digitisation of our holdings is mainly done on demand for specific research, publication or exhibitions projects.

Fortunately, as a new development, through the EU call 'Cultural Heritage Digital', the Az W is now receiving funds for digitisation for the first time. Within this funding context, open access is mandatory. We therefore aim to move beyond a general digitisation project of collection objects, which usually means creating a virtual representation of physical *objects.* With the project 'Az W Collection online meets the Encyclopaedia of Architects' we are developing an open online repository which merges and links other knowledge productions, which we have accumulated over the years through research, exhibitions or any other kind of scientific output.

'ENCYCLOPAEDIA OF ARCHITECTS'

The 'Encyclopaedia of Architects' is already available online via our website (http://www.architektenlexikon.at) and has become with more than 1.000 entries indispensable for architectural research on Austrian architects and their achievements. The database provides information on architects,

5 https://www.europeana.eu/de.

master builders, urban planners and theorists whose work shaped the appearance of Vienna from 1770 until the post-war years. The entries include biographical key data, listing of works, bibliographical references as well as detailed descriptions of architects curriculum vitae and analyses of built work, including separate glossaries on architectural-aesthetic, architectural-theoretical, architectural-historical, urban planning, and style-critical building characteristics, plus the exact bibliographical source reference for the referred buildings.

For years we have been asking ourselves how can we merge, enrich, disseminate the knowledge of this stand-alone biographical database with our other holdings. Especially many inquiries for images of the works mentioned in the entries have reached us over the years. By linking the 'Encyclopaedia of Architects' to approximately 19,500 photographs by Friedrich Achleitner, Margherita Spiluttini and Karin Mack, with structured metadata retrieved from various holdings and knowledge sources on approximately 12,000 buildings, we are now able to meet the requests of our users. By creating this corpus through the new funds for digitisation we are now laying the foundation for our online collection database.

FOUNDATIONAL ARCHIVE DESCRIPTIONS

From our rich photographic holdings, we identified the just mentioned three archives that we hold in our collection at Az W: Friedrich Achleitner Archive, Karin Mack Photo Archive, Margherita Spiluttini Photo Archive. To pair the well-known Achleitner Archive, with two female Archives was intentional. In combination with Achleitner's documentary collection and the compositional photographic approach of Spiluttini and Mack, the digital synopsis of our online collection database enables a pluralistic view of the diverse lives of the buildings in the course of time.

In the 1960s Friedrich Achleitner (1930–2019) began his systematic survey of Austria's architectural heritage. His five-volume work 'Austrian Architecture in the 20th Century' still determines our knowledge and understanding of Austrian architecture today. The Achleitner Archive contains 78,000 visual sources, which are now to be indexed and made available online.

In the initial phase as a chronicler of Austrian building culture, Achleitner was accompanied by his first wife, the photographer Karin Mack (1940–), whose architectural photographic legacy of around 1,000 pictures is part of the Az W collection. In this context, the question of the role of women in cultural and architectural practice arises, because in contrast to the architect profession, the profession of photographer enabled women to gain a certain visibility as early as the interwar period.

Comparable to Friedrich Achleitner, Margherita Spiluttini (1947–2023) shapes our visual perception of Austrian architecture. With over 4,000 documented buildings, the Margherita Spiluttini Photo Archive is one of the most important photographic collections on architecture worldwide. The focus of our project is her series *Wien Plan* a collection of 3,000 images that focus on historical buildings and looks at the transformation and ageing processes of key buildings.

At the same time, we want to break the classic master narrative in which the buildings are almost exclusively identified as the sole products of a single author. The person-centred dictionary is opened up through cross-references to other holdings and reveals other actors and contexts that played a role in the creation of architecture.

ADD-ONS

Over the years, the Az W collection has been constantly consulted. Exhibitions, research projects, publications, events initiated by us or others — have become testimonials for the interactions with the collection. What they all have in common was the production of knowledge, but unfortunately often in the form of standalone database solutions that subsequently degenerate into data graveyards. These large repositories of unused data are no longer compatible with today's FAIR data goals (findable, accessible, interoperable, reusable) for sustainable data storage.

The work on the permanent exhibition *Hot Questions: Cold Storage* provided the kick-off for the consolidation and harmonisation of existing individual databases into our online collection database. Since the founding of the Az W in 1993, a large number of individual repositories of data have accumulated alongside a classic inventory collection database management. Efforts to put an umbrella over the various databases have failed for a long time — the heterogeneity of the data and the question how to deal with the materials that are not physically in our collection were unresolved problems.

As practitioners in a museum, mediation determines our research and work practice, which increasingly we see as a strength. Our methodological approach is situationally adaptive just like our pragmatic and content-related decisions are connected with each other. This is similar to our approach in 'Hot Questions. Cold Storage': we ask questions or are asked questions, selectively go into depth or look at our holdings from several perspectives and link different actors and disciplines.

The same method is now applied in our new database. In addition to standardised *inventories of* single documents or architect's *catalogues raisonnés*, we will now open up to findings from our users, to *external* holdings and research materials which have been accumulated through our work. This collected data which previously remained unused as tacit knowledge, are now made accessible. In addition, they not only contribute to the contextualisation of our holdings, but at the same time facilitate internal work processes and remain usable for the future. This leads us to another important function of the new collection database as an indispensable

resource for administrative collection management purposes such as loans, condition reports, exhibitions, and publications.

HOT VIEWS: FROM THE DIGITAL COPY TO DIGITALITY

As a last consideration, in addition to providing multi-perspective background information and links with other data pools, it is adamant to develop adequate, new forms of visualisation for these materials. An online collection database that is a mere accumulation of objects records is no longer up to date. In addition to pop-ups, overlays and parallel narrative threads, it is the forms of presentation that interactively enable the organisation of knowledge according to various criteria of order and similarity — place, time, authorship, categorisation and networks between those. And in the end, the simple means of zoom in — zoom out in the digital display enable a form of scalability for collection visualisation: overall view ('distant viewing') and detailed view ('close viewing') are further opposing perspectives on knowledge. The theme of scalability fits perfectly with the ways in which the built environment is represented and, in an abstract sense, with our research ideas and contextual investigations.
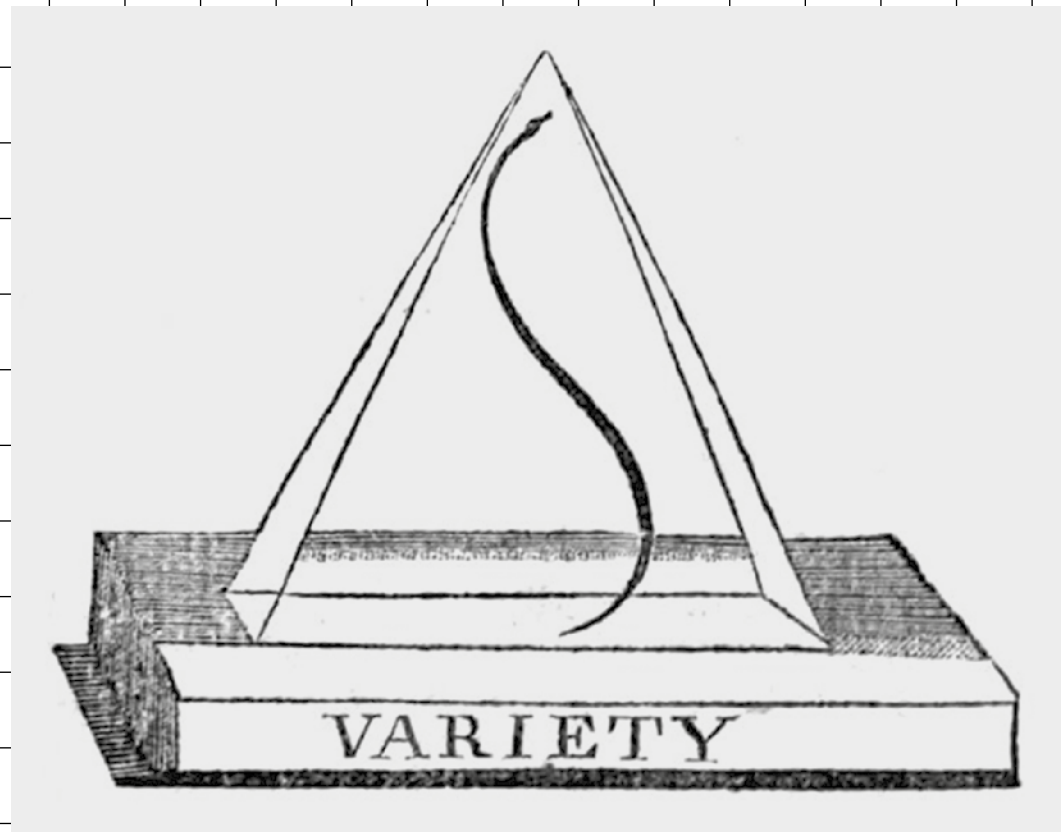
Illustration from the title page of The Analysis of Beauty, commons.wikimedia.org

Dana Arnold (Manchester School of Architecture)

Cherchez la Femme: Finding the Feminised Line

I have written and thought a lot about how we can interrogate the archives of architecture to allow us to bring other voices and actors to the fore, and the ways in which this reframing of the archive reconfigures the discipline. My focus here is on eighteenth-century architectural prints and drawings and how rethinking them makes them speak to current concerns about finding female voices and actors in the past. In this way, prints and drawings become an archive in their own right, which is freed from masculinist categorisation and taxonomies based on chronology and a focus on the male-author genius that continue to dominate western historical thinking.

The graphic line which, whether in a print or a drawing, is a form of writing that prompts a critical awareness of the various visual, technical, and semiotic modes of description.[1] And the field of relations both historical and actual in which the graphic line operates is in constant flux. We can, then, see how the line changes its identity over time and consequently has fluid potential, capacities, and indeed uses within its sphere of cultural production at any given moment. A different conceptualisation of the line can disrupt canonical historical narratives and perceived archival truths. If we attribute the line with agency it can work to challenge the gender assumptions embedded in normative, linear, verbal histories and their concomitant archival practices. I begin by thinking about the connection between the eighteenth-century artist William Hogarth and Gilles Deleuze — unlikely bedfellows but (and please forgive me) the line draws them together.

In his popularist treatise *The Analysis of Beauty* (1753) Hogarth outlines his theories of visual beauty and grace in which he feminises the line and identifies the waving line as the 'line of beauty' and the serpentine line as the 'line of grace'.[2] This feminised line has agency as it has the ability to lead the eye in a 'wanton kind of chase'.[3] My query here is how this agency, when combined with the mnemonic and descriptive qualities of the line identified by Hogarth, could challenge the archival practices that promote the hegemony of the sole author/genius (male) architect.[4] Hogarth's idea of the motion of the chase makes me think about Gilles Deleuze and the way in which he privileges the geographies of movement over history.

1   I discuss the resonance between visual and verbal descriptions of architecture in my recent book Dana Arnold, *Architecture and Ekphrasis: Space, time and the embodied description of the past* (Manchester: MUP, 2020)
2   Hogarth, *The Analysis of Beauty* (London: Printed by John Reeves for the Author, 1753), Xhapter VII, 'Of Lines', 38.
3   Ibid., Chapter V, 'Of Intricacy', 25.
4   Ibid., Chapter VII, 'Of Lines', 37; William Hogarth, *The Analysis of Beauty: With the Rejected Passages from the Manuscript Drafts and Autobiographical Notes* ed. Joseph Burke (Oxford: Clarendon Press, 1955), 206 and 231.

But first of all, I want to untie the line. Deleuze and Guattari speak of the concept of the rhizome that enables new connections to be made. Here the rhizome, as a root or fungus is used to explain research methods that allows for multiple, non-hierarchical entry and exit points in the presentation and analysis of the archive. This approach stands in opposition to an arborescent (hierarchic, tree-like) approach that favours dualist categories and binary oppositions. To quote Deleuze and Guattari from their *a Thousand Plateaus*:

> Every rhizome contains lines of segmentarity according to which it is stratified, territorialised, organised, signified, attributed, etc., as well as lines of deterritorialisation down which it constantly flees. There is a rupture in the rhizome whenever segmentary lines explode into a line of flight, but the line of flight is part of the rhizome. These lines always tie back to one another.[5]

The line of flight, like the line, has no beginning or end, but always a middle. And it is in this middle or 'in between' that everything takes place.[6] If we think about the Deleuzian notion that it is not what the line is but what it can do or be, then a line can be a mark, a trace, a contour or an outline, which is both seen and unseen.[7] In this way a line can form visible and invisible pathways and these fluid processes work to locate memory and recollection, and ultimately time through their shifting, crossing, and repeating. For Deleuze, the line both frees us from linear histories whilst operating as a process of historicisation. As we have seen, the line forms the basis of textual and visual histories. Here, I use it to retrace the feminised and female in drawing to present a provocation as to how we can rethink the archive.

There is a further connection here between Hogarth and Deleuze. For Hogarth the waving line is the 'line of beauty' and the serpentine line is the 'line of grace'.[8] Their varied form means they contribute most to producing beauty. The serpentine line 'gives play to the imagination, and delights the eye.' In addition, Hogarth admires 'the effects of quantity' as a source of beauty. Here we reach the sublime as an aesthetic category of expression and pleasure: 'vastness', 'horror', 'awe', 'immense', 'colossal', 'grandeur'. '[I]t is quantity which adds greatness to grace'.[9] Deleuze's 'line of flight' produces a transport or lift which can be interpreted as a kind of sublime. Indeed, Deleuze describes this as 'a sort of delirium'… . There is something demoniacal or demonic in a line of flight. […] What demons do is jump across intervals, and from one interval to another.'[10]

Where, then, is the demon in Hogarth's theory if his line allows us to jump across established textual (linguistically masculine) narratives and their

archival predicates? *The Analysis* begins with a quotation from John Milton's *Paradise Lost* (1667):

> So vary'd he, and of his tortuous train
> Curled many a wanton wreath, in sight of Eve,
> To lure her eye.

But the complete verse reads:

> With tract oblique
> At first, as one who sought access, but feared
> To interrupt, sidelong he works his way.
> As when a ship by skilful steersman wrought
> Nigh river's mouth or foreland, where the wind
> Veers oft, as oft so steers, and shifts her sail;
> So vary'd he, and of his tortuous train
> Curled many a wanton wreath, in sight of Eve,
> To lure her eye.
> *Paradise Lost* (9. 510–18)

'He' is Satan and he is at once feminised through the allusion to the ship and its movement as well as masculinised by the allusion to the 'skilful steersman'. I am drawn here to the use of the word 'wanton'.[11] Hogarth makes a further reference to Milton's Eve in his discussion of hair (see also above). 'The poet knows it, as well as the painter, and has described the wanton ringlets waving in the wind'.[12] Here Hogarth alludes to 'her unadorned golden tresses wore / Dishevell'd, but in wanton ringlets'. *Paradise Lost* (4.305–6).

Eve's hair attracts Satan but more importantly the waviness of her ringlets is echoed in Satan's serpentine movements as he approaches her. Indeed, Ronald Paulson has remarked 'Milton could reasonably be interpreted as implying that Satan's wiles are derived from the female line'.[13] But as W. J. T. Mitchell notes, Hogarth never mentions this in the text itself, despite numerous references to serpents and the promotion of a serpentine line as the epitome of visual allure.[14] However, there is a strong visual clue in the image of the line of beauty that appears on the title page of *The Analysis*. The serpentine line that floats in a pyramid atop a plinth entitled 'Variety' is in the form of a serpent, with a serpent's head and a pointed tail. It is also vertical, so its shape forms the letter S. Satan is, then, present in the feminised, demoniacal serpentine line. Is this then a way to disrupt masculinist (verbal) histories or descriptions through Deleuze's lines of flight?

5   Gilles Deleuze and Felix Guattari, *A Thousand Plateaus: Capitalism and Schizophrenia*, trans. B. Massumi (London: Althone Press, 1988), 10.
6   Ibid., 6–15.
7   Gilles Deleuze and Felix Guattari, *On the Line*, trans. J. Johnston (New York: Semiotext(e), 1983), 19 esp.
8   Hogarth, op.cit., chapter VII, Of Lines, 38.
9   Ibid., chapter VI, Of Quantity, 30.
10   Gilles Deleuze and Claire Parnet, *Dialogues* (Paris: Flammarion, 1977) and trans. Hugh Tomlinson and Barbara Habberjam (London: Athlone, 1987), 40.

11   For a fuller discussion of this see Abigail Zitin, 'Wantonness: Milton, Hogarth, and *The Analysis of Beauty*', *Differences*, 27:1 (2016), 25–47.
12   Hogarth, op. cit., chapter V, 'Of Intricacy', 28.
13   Ronald Paulson, *Hogarth's Harlot: Sacred Parody in Enlightenment England* (Baltimore and London: Johns Hopkins University Press, 2003), 194.
14   W. J. T. Mitchell, 'Metamorphoses of the Vortex: Hogarth, Turner and Blake', in Richard Wendorf (ed.), *Articulate Images: Sister Arts from Hogarth to Tennyson* (Minneapolis: University of Minnesota Press, 1983), 125–68 and132 esp.

In this way we can begin to unpick the linear and chronological viewpoints that are a hallmark of western historical thinking. As a consequence, it is possible to see how graphic representations of the architecture of the past can be independent of the preoccupations with progressive chronologies, authorship and style that dominate textual histories and their concomitant archival practices. The eye engages with history in a different way when looking at it rather than reading it—it is not a sequential left to right movement, instead it is a more random 'wanton kind of chase' of history as we follow the line. And this line is feminine.

The practice of printmaking reinforces the agency and feminisation of the line. Although not normally, formally apprenticed women, usually working in the family home, played an active role in the production of prints.[15] Throughout the eighteenth century, engravings were the most common kind of prints produced using the *intaglio* method.[16] Here the image is cut into the surface of a metal plate. When the plate is inked, the ink is pushed into the incised lines. The plate is then passed through a press with a sheet of dampened paper which pulls the ink out of the lines and transfers them to the paper producing a reversed image of that incised on the plate.[17] The force of pressure applied by the press, which was powered by the exertion of the printmaker, results in an outline of the metal plate itself being impressed into the paper. This is known as the plate-mark. Prints in the age before machine-powered presses were, then, produced by the efforts of the body, which could be male or female.[18] The (female) printmaker is then embodied in the line of her engraving. Moreover, the combination of production processes from original drawing, to the transfer for engraving, and the act of printing show us that prints and drawings are an archive produced through collective endeavour. And this archive can narrate histories other than that of the sole male author genius.

The relationship between the burin (a small, V-shaped chisel used to cut the lines into the plate), the plate itself, and the movement of the engraver complicates the relationship between print and printmaker. The process of engraving is fundamentally that of two linear movements, one straight and the other circular. The engraver produces straight lines by moving the burin diagonally across the plate, usually from right to left placing the plate in front of him or herself.[19] In this way, the movement of the engraver is embodied in the creation of the line. By contrast, curved lines are more complex requiring the combined movement of the burin and the plate. The latter is placed on a cushion filled with sand and rotated against the burin. Instead of the

draftsman's hand moving across the surface, here the surface moves across the draftsman's hand so reversing the relationship between draftsman and surface we have just seen in the creation of straight lines.[20] In this way, the production of the serpentine, feminised line disembodies the efforts of the engraver and gives agency to the line itself. Prints and drawings become an archive in their own right, which is freed from masculinist categorisation and taxonomies.

15   Lia Markey, 'The Female Printmaker and the Culture of the Reproductive Print Workshop' in Rebecca Zorach and Elizabeth Rodini (eds), *Paper Museums: The Reproductive Print in Europe, 1500–1800* (Chicago: David and Alfred Smart Museum of Art, University of Chicago, 2005).
16   Antony Griffiths, The Print before Photography: An Introduction to European Printmaking, 1550–1820 (London: The British Museum Press, 2016), 21, and Tim Clayton, *The English Print* 1688–1802 (New Haven and London: Yale University Press, 1997).
17   Engravers could use a mirror to transfer the image to the plate. On this point see Griffiths, loc.cit.
18   The physical processes of printing are described in detail in Carl Goldstein, *Print Culture in Early Modern France: Abraham Bosse and the purposes of print* (Cambridge: Cambridge University Press, 2012), 22 esp.
19   Markey, loc. cit.
20   Griffiths, loc.cit. See also William M. Ivins, Jr., *Prints and Visual Communication* (Cambridge Massachusetts: MIT, 1969).

Girjegumpi: The Sámi Architecture Library by Joar Nango and collaborators at the Nordic Countries Pavilion (18th International Architecture Exhibition – La Biennale di Venezia). Photo: Laurian Ghinițoiu (2023). CC BY-SA 4.0.

Carlos Mínguez Carrasco and Frida Rosenberg (ArkDes)

Indigenising the Archive: Girjegumpi – The Sámi Architecture Library

GIRJEGUMPI

In May 2023, *Girjegumpi: The Sámi Architecture Library* opened at the Nordic Countries pavilion at the 18th International Architecture Exhibition – La Biennale di Venezia. *Girjegumpi* is a spatialisation of conversations and research initiated by Joar Nango. Over the past two decades this project has expanded with site-specific adaptations while travelling to different locations in Sápmi and the broader Nordic region.[1] At each new site, the library has evolved together with multiple collaborations, including artists and craftspeople such as Katarina Spik Skum, Anders Sunna, Ken Are Bongo, and Anders Rimpi, among many others.

The word *Girjegumpi* is derived from two Northern Sámi words: 'Girji', meaning book, and 'Gumpi' – a small mobile reindeer herder cabin on sledges, often pulled by a snowmobile. This wordplay refers to a collection of books that are transported and displayed everywhere it goes. Originally it was an informal, personal collection of books that served as a place to gather around, including magazines, pamphlets, and hard-to-find fanzines. Since its origin it has transformed for every new occasion, in collaboration with friends, into a nomadic library.[2] It has become a critical project, that builds spaces for Indigenous imagination.

Central to *Girjegumpi* is an archive of more than 500 titles that embrace topics such as Sámi architecture and design, traditional and ancestral building knowledge, activism and decoloniality. This archive also comprises artworks, materials, design details, and found objects.

ACTIVIST, COLLABORATIVE, AND NOMADIC

Nango's original impetus of compiling literature around Sámi architecture is a response to the lack of references and publications on the topic during his years at the school of architecture at the Norwegian University of Science and Technology (NTNU) in Trondheim. To start collecting books around Sámi and other indigenous cultures was a form of resistance to the disregard to

1   The first expression and iteration of *Girjegumpi* took place at the culture festival Festspillene i Nord-Norge, The Arctic Arts Festival in 2018.
2   "Hanging out in *Girjegumpi*," a conversation between Joar Nango and Mathias Danbolt in *Huksendáidda arkitektuvra Sámis = arkitektur i Sápmi = architecture in Sápmi*, ed. Bente Aass, Solbakken (Stamsund: Orkana, 2022), 170.

the topic shown by the curriculum at the school, but also more broadly by the field of architecture. The intention was not only to gather printed references, but to find a 'place' and people to discuss them. Nango, in a conversation with art historian Mathias Danbolt says: 'When I was studying architecture in Tråante (Trondheim), there was nowhere to have these kinds of conversations. It was one thing that Sámi architecture was just barely covered in the course, but I also didn't have any other Sámi architects with whom I could establish a dialogue'.[3] The gathering of books became in time a way of building a network with other architects with similar interests, but also to initiate collaborations with artists, designers, and craftspeople from Sapmi.

Girjegumpi is a collaborative effort. The works that encompass *Girjegumpi* range in scale from small works produced by duojárs, for example the delicate reindeer skin pieces by Katarina Spik Skum used in the corners of some pieces of glass in the pavilion, to a full six-by-six-by-six wooden tent structure made of trees cut for this purpose and assembled by hand in situ by Tobias Aputsiaq Prytz, Joar Nango and Arne-Terje Sæther. Other works that can be found are a film collaboration between Ken Are Bongo with Joar Nango for a series of six episodes titled 'Post-Capitalist Architecture', the 'Mapping of Sámi Architecture', a research collaboration between Astrid Fadnes, Jenni Hakovirta, and Katrine Rugeldal, or the artworks of Anders Sunna. Even though the names of the authors can be listed, the in-situ process, and the true, often messy, creative, collaborative nature of all these works make the traditional, Western art and architecture credit system associated with artworks and design obsolete.

Nomadic by design, *Girjegumpi* is a living project addressing the relevance of Indigenous culture in architectural discourse and construction today, such as the importance of collaborative work; the use of resources in rapidly changing climate conditions; how to use local materials and embracing sensitive approaches to landscapes and nature. Beyond these global challenges, *Girjegumpi* highlights the architect's position towards a more polyphonic understanding of the world.[4]

POLITICAL, UNTRANSLATABLE, AND ALIVE

Girjegumpi, wherever it travels, it opens spaces for political resistance and self-determination for the Sámi people. The archive creates a form of empowerment for a historically marginalised and excluded community. With *Girjegumpi,* Nango and collaborators build a space where the

conversation about what is Sámi architecture is entangled with questions around sovereignty, land exploitation, decolonialisation, and the overall support for the development of Sámi cultural and artistic practices. This makes the archive become alive and destabilises the whole conception of what we might think the archive entails.

However, the unfolding of a project like *Girjegumpi* in a context like La Biennale di Venezia — a global event organised under pavilions labeled and supported by nation-states — presents many challenges. The space for political resistance needs to inevitably negotiate pressures of opening it up to an international audience, as well as vindicating a space of exception vis a vis a pavilion supported by Sweden, Norway, and Finland, which have a legacy of colonisation across Sápmi.

Girjegumpi is an indigenous archive that is untranslatable to Western archiving and categorisation protocols. When Joar is asked about the role of duodji as a form of architectural form, he responds: 'I like the way the concept of duodji insist on being untranslatable. Since the question of what Sámi architecture is, remains so unanswered, it's been natural for me to take my starting point in the status of duodji as an autonomous and uniquely Sámi concept when I'm searching for new, Sámi forms of architectural expression'.[5] This aspect of the untranslatability of certain concepts in Sápmi to other languages exemplifies the difficulty of translating indigenous forms of archiving and producing to traditional institutional codes.

How to define the multiple roles objects and relationships play in Sámi culture? The holistic way of doing and knowing in Sámi culture needs to negotiate forms of categorisation that tend to segment disciplines and professional fields. The untranslatability of the archive and the holistic epistemology of Sámi culture is a form of resistance to its categorisation. The sole separation between art and architecture biennials in Venice is therefore a hard separation that is impossible to delineate in a project like *Girjegumpi* and the roster of participants associated with it.[6]

Thus, *Girjegumpi* is a catalyser for community-building: the activation of the archive is paramount! It is primordial for Nango that *Girjegumpi* is 'used', the library 'visited', it otherwise has the propensity to become objectified. We think this might be a central question for the definition of a critical archive, or an archive that tries to resist definitions. Yes, it is a collection of books, but it is also a gathering of people around *Girjegumpi* that makes it alive,

3   "Hanging out in *Girjegumpi*", a conversation between Joar Nango and Mathias Danbolt in *Huksendáidda arkitektuvra Sámis = arkitektur i Sápmi = architecture in Sápmi*, ed. Bente Aass, Solbakken (Stamsund: Huse, Orkana, 2022), 170.
4   The first four paragraphs have in some version been published in the curatorial statement of *Girjegumpi: The Sámi Architecture Library*, by Joar Nango and collaborators, presented at the Nordic Countries Pavilion at La Biennale di Venezia, at the 18th International Architecture Exhibition, which take place between 20 May and 26 November 2023. The project is commissioned by ArkDes, (Stockholm, Sweden), Nasjonalmuseum (Oslo, Norway) and Arkkitehtuurimuseo (Museum of Finnish Architecture, Helsinki, Finland). The project was curated by Carlos Mínguez Carrasco and James Taylor-Foster.

5   "Hanging out in *Girjegumpi*," a conversation between Joar Nango and Mathias Danbolt. Ibid., 171.
6   The list of collaborators of *Girjegumpi* is long but important to mention is: Håvard Arnhoff, Ken Are Bongo, Petter Bratland, Stefano Crosera + Margherita Pasqualato (Cantiere Daniele Manin), Mathias Danbolt, Ole-Henrik Einejord, Astrid Fadnes, Jenni Hakovirta, Eirin Hammari, Elin Haugdal, Petri Henriksson, Tone Huse, Robert Julian Hvistendahl, Iver Jåks + Jon Ole Andersen, Anne Kare Kemi, Annik Kristiansen Hagen, maka design, Grete Johanna Minde, Karen Inger Anne Nango, Nils John Nango, Anne Henriette Nilut, Ole Thomas Nilut, Raisa Porsanger, Tobias Aputsiaq Prytz, Anders Rimpi, Katrine Rugeldal, Wimme Saari, Sámi Architecture Dictionary Group, Arne-Terje Sæther, Katarina Spik Skum, Mary Ailonieida Sombán Mari, Četil Somby, Anders Sunna, Anna-Stina Svakko, Eystein Talleraas, Petter Tjikkom, Magnus Antaris Tuolja. The Collaborating institutions are: Ájtte, Arctic Arts Festival — Festspillene i Nord-Norge, Sámi Dáiddaguovddáš (SDG), RDM — Sámiid Vuorká-Dávvirat, UiT — The Arctic University of Norway.

so the books and the topics addressed in the archive can be continuously discussed and reinvented.

Girjegumpi, in this sense is an archive made of *itinerant reanimations*, if we follow art historian Hal Foster's dialectics, which he presents in his essay 'Archives of Modern Art'.[7] For the archive to become alive, it needs to become a library, a place, a gathering structure, a discussion device, a tool for redefinition that cannot be unmanned, that needs the bodies and minds thinking and building discourse around it. It is not a place where things are kept in its original context, or 'left to die', quite the opposite. It needs of its reanimation to perform. This is the argument that Hal Foster presents as the dialectic of reification and reanimation in the art museum and in the art history during the late Nineteenth Century and the Twentieth Century. Foster argues through comparing examples of authors that defend the idea of a museum that is the mausoleum for the work of art, a place for the work which is 'left to die', versus a view of the museum as a place where the artwork has an afterlife, a space 'for the fantastic reanimation, indeed of spiritual idealisation'.[8]

An interesting effort to imagine new forms of maintaining the project alive is the digital version of *Girjegumpi* created in 2019 by Joar Nango in collaboration with ArkDes. 'The Virtual Library of Sámi Architecture'[9] is a digital project that transfers some parts of the archive to a digital platform. The project serves as an open archive for anyone interested in questions related to Sámi culture, and it foresees the possibilities of how an indigenous archiving can become interactive and collaborative in the digital sphere.

The idea of itinerant reanimations is productive in order to put in perspective how *Girjegumpi* redefines the role of the institutional frameworks that it negotiates with, in order to build new forms of hospitality where the visitor becomes an active member, and where the custody of the archive becomes a shared responsibility with the visitor, with mutual stewardship.[10]

CONCLUSION

Girjegumpi: The Sámi Architecture Library confronts museums and cultural institutions with political and cultural activism that destabilises forms of curatorial, archival and conservation practices. The project opens spaces for Indigenous self-determination, it defies notions of categorisation and authorship. The work ArkDes has done in support, care, and facilitation of the

unfolding of *Girjegumpi* at the Nordic Countries pavilion for the 18th Venice Architecture Biennale has helped us who work at the museum to relearn our practices. Our mindsets needed to rethink the ways in which the works from Sámi architects as well as the works in the collections who have been built in Sápmi can be studied, presented, and shared with audiences.

Girjegumpi demands a transformation of the traditional hospitality, hosting, and the animation of works performed in the museum. The nomadic nature of the project empowers its position in the negotiations with the political and institutional frameworks it temporarily inhabits. Finally, and perhaps most importantly the expanding nature of *Girjegumpi* builds alliances with other Indigenous cultures and aligns efforts with a broader movement towards Indigenous self-determination.

7   Hal Foster, "Archives of Modern Art," *October* 99, (Winter 2002): 81–95.
8   Foster, "Archives of Modern Art," 85.
9   The Virtual Library of Sámi Architecture can be visited here: https://gumpi.space/en. Accessed 2023–09–05. *Kiruna Forever* was an exhibition at ArkDes around the relocation of the city of Kiruna in the Arctic in Sweden, and where Joar Nango participated as part of a series of perspectives from Sámi artists and architects responding to the transformations in the region. The exhibition was curated by Carlos Mínguez Carrasco and was open from April 24 2020 until February 7 2021.
10   See Bastian, J.A. "Mine, yours, ours: archival custody from transaction to narrative." *Arch Sci* 21, (March 2021): 25–42.

Memory Map of a Chinese corner shop and home in Lady Selborne before forced removals and demolitions. Drawn collectively by author and researcher, Meghan Ho-Tong, and former resident and witness, Sonia Ho-Tong.

Meghan Ho-Tong (University of Cape Town)

Reading Sino-African Archives: Expanding Histories of the South

INTRODUCTION

Archives are affective places, evolving from a reciprocal relationship between a user and the 'archival habitat'.[1] As psycho-geographical environments, they link diverse chronologies in different ways. Constituted from artefacts of the past that exist in the present, precisely requiring presence, archives are invented whenever we have a question we need to answer. They are not static repositories, nor are they neutral. Thinking with Achille Mbembe, archives are fundamentally a process of selection and discrimination, resulting in the granting of a privileged status to certain artefacts, certain histories, and refusal of the same acknowledgement to others judged 'unarchivable'.[2]

As politically and economically negotiated forms of cultural production, buildings and settlements also carry archival traces of social, political, economic and ecological histories relevant in the present. Their entanglement with a specific place sediments them as productive epistemological entry points, beyond conventional discussion of style or aesthetic, contributing to the construction of transregional social and cultural histories which address, amongst many other things, labour, geopolitics, race, gender, economic systems, and technologies.[3] As architects and as researchers, we are implicated in the construction of archives and must ask ourselves—who gets to write archives, how have they been written and what stories get to be told?

Aware of these politics, I believe it's necessary to investigate our approach to the gaps, absences and erasures created by colonialism, apartheid, racism, and other practices of archival decision-making that determine what should and should not be preserved or remembered. These erasures are not simply countermeasures to the production of history, but rather, they are history. In *Archive Wars*, historian Rosie Bsheer explores how the production of history is premised on the selective erasure of certain pasts and the artefacts that are witness to them. From obscuring documents to the physical demolition of buildings, destruction is a requisite for the making of History and of the state.[4] Where the crafting of a History relies on manufacturing of territories of emptiness which are then available to be

1   Rachel Lee, "Engaging the Archival Habitat: Architectural Knowledge and Otto Koenigsberger's Effects," *Comparative Studies of South Asia, Africa and the Middle East* 40, No. 3 (December 2020): 526–540.
2   Achille Mbembe, "The Power of the Archive and its Limits," in *Refiguring the Archive*, ed. Carolyn Hamilton et al. (Dordrecht: Springer, 2002), 19–27.
3   Lee, "Engaging the Archival Habitat," 526–540.
4   Rosie Bsheer, Archive Wars: The Politics of History in Saudi Arabia (Stanford: Stanford University Press, 2020).
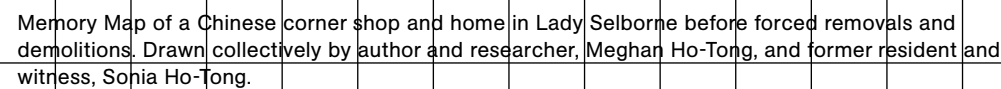
occupied. While Bsheer was describing the Saudi state's bureaucratised efforts to construct a historical narrative through national archives and re-ordering of public space, the mechanism is common also to the broader project of coloniality, and has particular resonances with the construction and destruction of the postcolonial apartheid landscape of South Africa.

If we are to think from a southern perspective—operating under the radar, through the gaps and inside the shadows of Western polemics—what then is an architectural artefact in the context of the Global South? In the forthcoming book *Fugitive Archives*[5], editors and research fellows underscore the importance of methods that emerge when privileging voices rooted in diverse knowledges and experiences of space. Understanding the need to move marginalised perspectives back to the centre, this means reorienting towards context, and grounding in specific modes of recording, communicating and learning. To create African architectural archives that are situated, new forms of evidence need to be created that disrupt western and colonial knowledge frameworks and expand existing architectural archives. To recentre Africa in histories of architecture, researchers have to develop new ways of seeing, listening, recording and learning, with the capacity to acknowledge alternate knowledges of space and place.

ORIGINS OF THE ARCHIVE

Against this backdrop, my research explores histories of Sino-African migration and settlement in South Africa. It takes as starting point my family history, and in particular, a small booklet of stories passed down from generation to generation. The archive is held together by custodians along matriarchal lines—mother, aunt, daughter, niece—who conjured narratives and events real and mythologised by memory. These stories are often intertwined with physical territories of dominion and control. An incisive fragment into a larger history, the archive points to the broader complexities of a colonial and apartheid condition as it intersects with frameworks of mining labour and land extraction, racially segregated group areas and forced removals, migrant communities and constructions of home or spatial strategies of survival.

The artefact itself is simple, operating outside the boundaries of the traditional archival artefact. Inscribed on the last page of the copyshop-printed cartridge-paper booklet, folded and stapled down the middle, it reads, *'I hope this information is useful to you and you will have a better understanding of your roots.'* It's not addressed to me, or anyone in particular, but to an ancestry displaced and rerooted.

The influx of Chinese into South Africa towards the end of the 19th century and beginning of the 20th century can be understood as part of a broader colonial project of extraction. The economic crisis following the Anglo-Boer War in 1902 produced a need for cheap labour on the gold mines. In parallel to the longer-term crafting, by colonial and apartheid states, of a native migrant workforce—dispossessed of land and in a suspended state of migrancy due to land policies like the Natives Land Act—an active recruitment campaign was also established to supplement the mines with Chinese and Indian labour. While the majority of the 63 695 indentured Chinese labourers dispatched to South Africa between 1904 and 1907 were eventually repatriated, some settled in South Africa, and many South African-born Chinese are descendants of independent migrants who arrived from 1870's onwards[6] in search of Gold Mountain.[7]

As a mixed-race Chinese South African born from these histories, and from a generation that lived the transition from apartheid to independence, I am interested in the cultural artefacts of marginalised, minoritarian peoples working either in the peripheries or invisibly at the centre. The use of concepts such as hybridity or cultural difference become important in dismantling the reductionism of binary systems.[8]

Too small in numbers to constitute a separate group area, occupying a kind of statistical anomaly, and falling within the ambiguous gradient of a racialised 'other' during apartheid, the Chinese operated on the margins and in peripheries. Their in-betweenness produced a system of strategies for the navigation of territories of control and subjugation, and provides distinct and complex views into significant histories of postcolonial South Africa. The research project asks how an archive of migration, that is fragmentary and multilocational, might have the potential to destabilise presumptions of fixity, offering sites of resistance to oversimplified histories of settlement, and allowing the inclusion of marginalised voices.

EXPERIMENTS IN CREATIVE MAPPING

Experiments in drawing out the archive have been based in photography and creative map-making. The photographic project places archival imagery in dialogue with a survey of the land as it is now. Reading simultaneously across chronologies draws connections between built manifestations of the Afrikaner state, in monuments, buildings, and the city of Pretoria itself, and the haunting absence of Lady Selborne, a multiracial settlement that became the largest dispossession and forced removal project in Pretoria, and where many Chinese historically lived together with Black, Coloured and Indian communities.

Creative mappings have attempted to spatialise alternate, frequently overlooked and embodied knowledges around place-making, settlement

5   Claire Lubell and Rafico Ruiz, eds. *Fugitive Archives: a Sourcebook for Centring Africa in Histories of Architecture* (Montreal: CCA/Jap Sam Books, 2023).

6   Melanie Yap and Dianne Leong Man, Colour, *Confusion and Concessions: The History of the Chinese in South Africa*, (Hong Kong: Hong Kong University Press, 1996), 112.
7   Darryl Accone, *All Under Heaven* (Cape Town: David Philip Publishers, 2004).
8   Felipe Hernandez, Bhabha for Architects, 1st ed. (London: Routledge, 2010).

and architecture in the context of physical and epistemological erasures. A memory map of 120 La Fleur Street documents a former Chinese corner trading store and home in Lady Selborne. This live-work typology was typical of Chinese migrants, who worked extensive hours to make a living, and positioned their stores, and so their homes, in multiracial settlements by designation of their race and proximity to low-income communities that their stores served. In Lady Selborne specifically, the proliferation of Chinese corner stores emerged out of the overlaps of property law and racial geopolitics—where the Chinese were not allowed to own land, but were favourably granted trading licences by the state, and so corner trading spaces were often rented from African owners by the Chinese. These Chinese corner shops, apart from their commercial and economic value, also functioned as an extension of the wider communities' homes[9]. Offering their refrigerators to those houses without electricity, and serving as pantries for residents who didn't have space to store all their foodstuffs, the shops became significant socio-cultural spaces within the urban fabric.

The method of drawing the memory map is significant, an artefact co-produced through situated testimony of a witness to the space simultaneously recorded by the researcher through the architectural plan. In describing the films of Jean-Luc Godard, Eyal Weizman recalls that he 'did not make films about politics, but made films politically'; asking what social relations go into the production of evidence?[10]. Working against the epistemological wrecking-ball of colonialism, that destroys not only lifeworlds but also documentations of the fact of its destruction, truth practices such as working together on the social production of facts cultivates a solidarity and resistance that contributes to the commons and recognises diverse experiences of space.

A second mapping draws out a network of multiracial enclaves within the segregated apartheid landscape as a shifting archipelago through which it was possible for liminal identities to drift. It uses Filip De Boek and Sammy Baloji's framing of the 'hole' and 'mountain' in postcolonial African cities to generate an epistemology of the city through topography.[11] On the one side the man-made mines of Johannesburg, the Gold capital, and across the plateau the Magaliesberg Mountains of Pretoria, the state capital, form two figures of mountains, embodying historical layers both colonial and apartheid, that have contributed to the formation of a physical and mental landscape entangled with power. Between these mountains, there existed a series of interconnected 'holes', gaps between separate group areas, where diverse races, and specifically Chinese, lived together—Sophiatown, Western Native Township, Commissioner Street, Marabastad and Lady Selborne. The fact of their racial integration was the reason for their

condemnation by the state as 'black spots', or slums, near white centres, which led to forced removal and demolition. When one township was marked for erasure, Chinese communities drifted and reformed in another. The wave of Chinese traders and Reef Chinese in Lady Selborne resulted from the imminent threat of forced removals in Sophiatown[12], a detail echoed in my family archives describing Lady Selborne as a place where 'lots of Chinese decided to move'.[13]

Taken together, the mappings attempt to surface strategies of resistance and survival practised by migrant Chinese communities in South Africa. The findings, and their method of making, offer some resistance to dominant narratives that tend to dismiss the architectures created by common people in the act of survival. This includes appropriations of space they carry out in urban centres in order to live and work.

THE DIGITAL TURN

Already a peripheral history, could the embodied, oral, printed, analogue-photographed, single-copy, mapped archive of Sino-African migration, inscribed largely in memory and place, be made more accessible through digital reconstruction?

In the axonometric reconstruction of a suburb in Johannesburg[14], Sumayya Vally and Sarah De Villiers spatialise the imaginary and real-world registers of toxic mining landscapes through the story of supernatural communication networks as a by-product economy of the ground-radioactivity of a nearby impepho plantation. With audio, visual and written narratives embedded in the digital artefact, this kind of reconstruction provides a framework for complex histories contained in diverse archival traces. While acknowledging the limits of translating an affective archival habitat digitally, could the potentials of the digital repository form the grounds for greater access, particularly for narratives of the Global South.

And if we further question the digital forms a southern archive could or should take, the need for new ways of seeing may require a move away from high-resolutions, originals and perfection. Filmmaker Hito Steyerl makes a case *In Defence of the Poor Image*, acknowledging its capacity to transform quality into accessibility—'The poor image is a copy in motion. Its quality is bad, its resolution substandard. As it accelerates, it deteriorates'.[15] It speaks to the original archival photographs in family albums, re-photographed with cell phone cameras and uploaded, downloaded, shared along grassroots distribution circuits. One might imagine another form of

9   John Seakalala Mojapelo, *The Corner People of Lady Selborne* (Pretoria: University of South Africa Press, 2009), 133.
10   Eyal Weizman, "Atmospheric Violence," filmed September 2022 at Watson Institute for International and Public Affairs, Providence, video, 1:47:22, https://www.youtube.com/watch?v=sGcTXL0MTVY&ab_channel=WatsonInstituteforInternationalandPublicAffairs (accessed August 31, 2023).
11   Filip De Boek and Sammy Baloji, "Positing the Polis:Topography as a Way to De-centre Urban Thinking," *Urbanisation* 2, No. 2 (November 2017): 142–154.

12   Mojapelo, *Corner People*, 28.
13   Alice Ho Tong Poon, *Ho Tong Ancestry* (Pretoria: Self-Published), 5.
14   Sumayya Vally and Sarah de Villiers, "You Have a New Message: What of Johannesburg's Many Deaths—And What if These Could Speak?," *Ellipses Journal of Creative Research*, March 24, 2021, https://ellipses2022.webflow.io/article/you-have-a-new-message (Accessed August 31, 2023).
15   Hito Steyerl, "In Defence of the Poor Image," *e-flux Journal* 10, November, 2009, https://www.e-flux.com/journal/10/61362/in-defense-of-the-poor-image/ (Accessed August 31, 2023).

value defined by the velocity, intensity and spread of these images, where the poorer image is often all that remains as evidence of histories not recognised by formal archives.

Steyerl was specifically discussing the medium of cinema, arguing for a real and contemporary imperfect cinema, more ambivalent and affective, that strives to overcome the divisions of labour, race, class society[16] and enables the participation of diverse perspectives. In my own filmic practice, I've investigated short films as atmospheric constructions of force and meaning that ask viewers to linger, in the hope that a more sensual knowledge of place might emerge. I am interested in pursuing future cinematic iterations of creative maps that tap into poor images as popular images — images that can be made and seen by many. Transforming film to clips. Using low-definition, fractured and flexible temporalities, and multilocational fragments. This speaks back to multiple registers of this Sino-African archive; in the YouTube-rip of *Kill or be Killed*, a popular 1960s kung-fu film set in South Africa starring my great uncle, otherwise lost to cassette, or the socio-cultural significance of the cinema space recounted in the anecdote, *'Although the Ho Tongs were poor, they were a happy family. There was no T.V. in those days, so they went to the bioscope "theatre" down the street'.*[17] It's perhaps in the haze of the poor image that diverse realities come into focus, and it's possible to find expression for hybrid identities and the representation of marginalities.

16   Julio García Espinosa, "For an Imperfect Cinema," trans. Julianne Burton, Jump Cut, No. 20 (1979): 24–26.
17   Poon, *Ho Tong Ancestry*, 5.

Loly Sanabria and Barry Bergdoll at the archives of architect José Tomás Sanabria, Caracas, Venezuela, 2014. Courtesy of the author.

Patricio del Real (Harvard University)

Futurising Latin America: With the Anxiety of Presentism, We Enter the Archive

Today, the collapse of the future has given way to futurity. In this context, any architecture exhibition that turns to the archive of modern architecture posits a distinct historical time and mode of production that emerges in the context of modernism's temporal disintegration. Any return to the past has its pitfalls and its potential dangers. In an era of uncertainty, we are seduced by the historical document, by the magnetism of its patina of deep authenticity. Can we resist their allure? One can approach the archive with nostalgia for the slow time of architectural productions that seem to preserve the aura of the 'work of art' that, as Walter Benjamin noted, died with mechanical reproduction. However, this kind of management of the past is a grave error. The turn to the archive that marks contemporary curatorial practices in architecture must confront the loss of the aura. The display value of any work then must contend with this loss, in other words, with the secularisation of the work, from its coming of age, brought about by modernity.[1]

These ideas are a result of vigorous conversations with Argentinian architecture historian Jorge Francisco Liernur over several dinners, as we recently discussed the implications of the exhibition *Latin America in Construction: Architecture 1955–1980*, which opened at the Museum of Modern Art, New York, in 2015. Along with architecture historians Barry Bergdoll, then MoMA's Chief Curator of Architecture and Design, and Brazilian Carlos Comas, Liernur and I were part of the curatorial team of the exhibition, along with a network of scholars and cultural agents in Latin America that made possible this endeavour. How to think about the future via Latin America—how to *futurise* Latin America—remained very much in my mind as I took the lessons of that particular MoMA exhibition into my research on the museum and my continued teaching of courses that focus on museums, architecture archives, and exhibitions.

A strong tradition remains to frame Latin America as the land of the future, as the land of 'failed' architectural and social experiments. Today, however, that Latin America is not the land of the future but rather of melancholy over a haunting macro-politics routinely presented in Europe and the United States. The modernist utopia, dependent on 'the plan' and top-down social

1   I'm drawing from several sources: Peter Osborne, *The Politics of Time. Modernity and the Avant Garde* (London; New York: Verso, 1995). Paolo Virno, *El recuerdo del presente. Ensayo sobre el tiempo histórico* (Buenos Aires; Barcelona; México: Paidós, 1999). For the notion of futurity in relation of race in the Western Hemisphere see, Juliet Hooker, *Theorizing Race in the Americas: Douglass, Sarmiento, Du Bois, and Vasconcelos* (New York, N.Y.: Oxford University Press, 2017); for futurity in the context of Afrofuturism see, Tina Campt, *Listening to images* (Durham, N.C.: Duke University Press, 2017); for futurity in architecture see, Ingrid Mayrhofer, *Architecture, Futurability and the Untimely: on the Unpredictability of the Past* (Bielefeld: Transcript, 2022)

engineering, crashed in the late 1960s, taking with it a future that cancelled everyday experiences of modernity in favour of 'universal' conditions imagined by the privileged few, architects amongst them. For all its good will and optimism, this temporal modality of modernism's future remains caught in the affirmation of a static horizon that is fastened to a space with no time.[2] So, if we are to jumpstart the future by reconceptualising it as futurity, how do we do this? If we are to salvage the horizon of expectations still present in the works of modernism, we must recover the lost futures buried in the archive.

There's no denying that the work of the architecture historian has been enriched by exhibitions that engage the archive, which today appears to be a consolidated trend mobilised by the architect-curator as well. Curatorial practices that engage the archive enable the translation and transposition of architectural practices into museums and exhibition spaces. In these sites, architecture becomes part of cultural work. This work has expanded the narrative sites of architecture where values are being administered.[3] Entering the cultural sphere and its diverse performative sites, architecture, however, has generally been at a 'loss,' since it enters typically as representation — principally via drawings, photos, and models — that solicit their own material and historical approximation, distinct from the 'mandate' of encountering the 'actual' work in the built environment. This 'loss' has also opened new interpretations of architecture that both enrich and impoverish the discipline by questioning the limits of its practice. The turn to the archive then operates a dual 'loss' — of the actual object as built work and of the aura of its representation. Architectural exhibitions are but the management of these losses, of these voids present in any show. The turn to the archive is thus underpinned not only by the cultural sites of the management of the past and their politics of memory but also by the distinctiveness of architecture's own archive — both concentrated and dispersed — embodied in the work and in representations.

The multiplication of narrative sites of architecture culture comes with the anxious presentism of our contemporary times and the uncertainty of which values to defend. As a depository of the past, the archive has been a privileged site of the writing of history. The critique of knowledge has exposed the institutionalised powers and systems of control that underpin the management and representation of the past. In all, the archive is far from neutral.[4] Any 'opening' of the archive, along necessary critiques, must attend to the singularity of the media and historical specificity of its production. In short, we must attend to architecture — to its archival logic and to its cultural economy.

2   'The utopic,' as Grosz argued, 'has no future.' Elizabeth Grosz, Architecture from the Outside. Essays on Virtual and Real Space (Cambridge, Mass.: London: MIT Press, 2002), 138.
3   See, Giovanna Borasi, Albert Ferré, Francesco Garutti, Jayne Kelley, Mirko Zardini, Jonathan Hares, Noura Al-Sayeh, and Centre canadien d'architecture, The Museum Is Not Enough. No. 1–9 (Montréal, Québec: Canadian Centre for Architecture; Sternberg Press, 2019).
4   For a foundational approximation to the dialectics of history and memory see, Pierre Nora, "Between Memory and History: Les Lieux de Mémoire," Representations, No. 26 (1989): 7–24. For a recent critique of the archive see, Ariella Azoulay, "Archive," Political Concepts. A Critical Lexicon, July 21, 2017. http://www.politicalconcepts.org/archive-ariella-azoulay/

In the context of that vast and multifarious region routinely called Latin America, the critique of the institutional archive is conditioned, with respect to architecture, by its weakness and precarity. The recent 'exodus' of private archives — such as those of Brazilian architects Paulo Mendes da Rocha in 2020 followed by that of Lucio Costa's in 2021 (both donated to the Casa de Arquitectura in Portugal), and the Amancio Williams Archive from Buenos Aires, which sought refuge in 2020 at the Canadian Center for Architecture in Montreal — revived concerns first voiced in 1995 with the acquisition of the Luis Barragán archive by Vitra in Switzerland. That same year, Harvard University's Frances Loeb Library Special Collections accessioned the archive of Argentine architect Jorge Ferrari-Hardoy. These acquisitions, however, are not commensurable. The acquisition of the entire works of Barragán was an outright commercial transaction of over $2-million U.S. dollars, according to the Mexican press, that laid claim to the buildings themselves as it sought to trademark and police all future photography of the built works. Two years after Francis Fukuyama had declared 'the end of history' in the late 20th Century, even the architecture archive seemed to be swept away by the angel of neoliberalism in the speculative bonanza of an emerging cultural market. [5] Yet the flight of those archives of Mendes da Rocha, Costa, and Williams are framed not by the promised end of history but, rather, by the overarching structural precarity that, according to Italian Marxist theorist Franco Berardi, is the constituting condition of a time with no future. [6]

The question is one of cultural commodities and the uneven intellectual markets. Let me be clear, I'm not launching some kind of 'Latin Americanist' or nationalist lamentation against the exodus of archival materials and original works from the region. At Harvard, the Ferrari-Hardoy collection is not alone, and is in very good company, residing alongside the entire works of British architects Allison and Peter Smithson and Japanese architect Tange Kenzo — gifted to the Frances Loeb Library in 2003 and 2011, respectively.[7] The exhibition Latin America in Construction served to increase MoMA's collection holdings, perpetuating uneven cultural playing fields. At the same time, the presence and preservation of these original materials that have left the region enable cultural operations that break the regional enclosure of this architecture. In other words, in a museum like MoMA these works may cease to be 'Latin American'. There are no easy answers. Willingly or not, the migration of archives and original works is a means of cultural and temporal silencing. The migration or re-location of any archival collections re-positions its meaning and brings with it serious challenges to underfunded scholars and cultural institutions for which these works become inaccessible. Archives are silent without their use, and who uses them — who has access to them — continues to be a pressing question.

5   Francis Fukuyama, The End of History and the Last Man (New York: Avon Books, 1993)
6   Franco Berardi, Precarious Rhapsody: Semiocapitalism and the Pathologies of the Post-Alpha Generation (London: Brooklyn, N.Y.: Minor Compositions; Distributed by Autonomedia 2009), particularly see, Chapter 2. Also see, Lucas Van Milders, "Precarity/Coloniality," Theory & Event 24, No. 4 (2021): 1068–1089.
7   The exodus of the Tange Kenzo archive caused great concern in Japan and spurred initiatives to prevent further flights. Conversation with architecture historian and theorist Seng Kuan, September 20, 2022.

What is at stake is the production of knowledge. Who ultimately controls this production and who has the means of making architecture cultural work? The migration of archives thus strikes at the core of cultural or soft power but, more importantly, it strikes at futurity itself. As modernist futures are extracted from the region, they leave behind the built works as the detritus of yesterday's future.[8]

In 2015, our curatorial strategy with the MoMA exhibition was that of accumulation, the presentation of an overabundance of materials that aimed both to impress visitors with the quality and variety of architectural responses and to lure scholars to engage in further research. It acted as an implicit call for future hermeneutic actions on the project of *Desarrollismo* or Developmentalism, an overarching industrialising agenda embraced by governments across Latin America after the Second World War that produced the growth of an urban-middle class imagined as an agent of modernisation. The exhibition was staged as an archive of the period's architectural production organised in thematic clusters grounded by well-known canonical works. This framing presented the dialogics between canonical and lesser-known works but, more importantly, between history and memory, between monument and document, caught in a vortex of original materials. We mined archives from across the region — and beyond — to redress past presentations at MoMA. Since the 1943 exhibition *Brazil Builds*, MoMA had engaged the region's modern architecture in a ritual performance of the International Style, not absent of pan-Americanist politics. It had been 60 years since Henry-Russell Hitchcock's *Latin American Architecture since 1945*. In 2015, we engaged a specific institutional site and the long history of cultural relations between Latin America and the United States. The moment was one of great optimism echoed by the British magazine *The Economist,* which for its September 11, 2010, cover, bombastically declared the region 'Nobody's backyard' and illustrated the idea by appropriating Joaquín Torres-García's now-famous 1943 *América invertida* (Inverted America) with its 'south-up' gesture of epistemic emancipation.

For reviewers, the exhibition showed a period 'possessed by a bygone optimism'. In all, it recovered a time of dreamers when Latin America was 'the future,' *New York Times* critic Michael Kimmelman argued.[9] *Latin America in Construction* returned visitors to a period of 'the abiding faith in public largess and its social agenda,' in which the processes of urbanisation were front-and-centre in the minds of many. Overall, it served as a wakeup call as we hurtled toward a future in which a third of the population will be living in slums, 'mostly in the so-called global south that includes Latin America. Once again, the region is the future,' as Kimmelman noted.[10] As potent as such observations are, one must be vigilant of their focusing power. Latin America was not the refuge of a lost modernist arcadia, and any such perspective willfully hides the malevolent and destructive politics

of the period.[11] For Kimmelman, the staging of the exhibition necessitated a political orientation. The exponential aggregation of materials that 'lumps some nations together and ignores others' made it next to impossible to discern historical details; the exhibition 'glides over politics'.[12]

If the exhibition was low in historical details, it was ripe with architectural facts. The Latin America defined by macro-politics — caught in the web of political conspiracies — tends to outshine the micro-politics of aesthetic productions.[13] As Brazilian psychoanalyst Suley Rolnik argues, it is necessary to differentiate between two modes of politics present in artistic — and I will add *architectural* — practices: those of the 'macro-political nature [that] basically transmit ideological content, and this brings them closer to activism than to art. In contrast, in the second type of action the political constitutes an element that is intrinsic, rather than extrinsic to poetic investigation'. This 'macro-political tendency', Rolnik adds, has been the hegemonic interpretative tool when examining aesthetic practices in Latin America.[14] Moreover, this approach to Latin America, as Ronilk argues, is concomitant with the archival turn — '*mania',* in her words — under globalisation.

The return to the past is a fundamental issue of our time. Without forgetting that the idea of a Latin America *in* construction presupposes the destruction of that which already existed in that place called Latin America, and taking Rolnik's suggestion of a micro-politics of exception, one can return to the modernist archive of a difficult political period to recover buried futures to have them insist on the present.

Looking back at our 2015 efforts, I would venture that the unrealised, yet latent, promise of the exhibition was how the micro-practices of architecture's past may contaminate our present. The turn to material culture — to the tradition of hand drawing in architecture, for example — continues to offer a critique of contemporary processes of image production and the dominance of a new kind of visuality preferred by the society of spectacle. This return to past modes of production can be a recovery of historical consciousness. In addition, the turn to the archive makes clear that the embodied memory of architectural subjects persists and presses on the present through recorded gestures and habits. These memories continue to seduce and haunt us. How we embrace or banish these phantoms is up to us.

8   See, Norma Evenson, "Brasilia: Yesterday's City of Tomorrow," in *World Capitals: Toward Guided Urbanization*, ed. H. Wentworth Eldredge (Garden City, New York: Doubleday & Co., 1975), 470–506
9   Michael Kimmelman, "Latin Visions, Fleeting Dreams," *The New York Times*, May 01, 2015.
10   Ibid.

11   We made politics in the exhibition explicit with a 30-meter wall that carried a chronology with social, political and economic events of the period.
12   Michael Kimmelman, "Latin Visions, Fleeting Dreams."
13   On the interpretation of Latin American conceptual art and the 'pensamiento del complot' or the mind of conspiracy see, Andrea Giunta, "Imaginarios de la desestabilización," in Rodrigo Alonso curator, *Sistemas, Acciones, y Processos. 1965–1975* (Buenos Aires: Proa, 2011), 49–58.
14   Suely Rolnik, *Archive Mania = Archivmanie* (Ostfildern: Hatje Cantz, 2011), 7.

Archival Excess

A local resident association's files from the 1980s kept in the kitchen of an otherwise closed-off community room, Brittgården, Tibro, Sweden. Photograph: Heidi Svenningsen Kajita, 2019.

Heidi Svenningsen Kajita (University of Copenhagen)
and Jos Boys (Independent Scholar)

Activating Social Housing Archives (Meeting Minutes)

Location: Room: Landscape, University of Copenhagen
Date: March 10th, 2023
Time: 11.30–17.00
Attendees: Hosts: Jos Boys, independent scholar, and Heidi Svenningsen Kajita, architectural researcher, University of Copenhagen. Participants: Rikke Lyngsø Christensen, architectural historian and research librarian at the Royal Danish Library; Gitte Juul, independent practicing architect; Kris Nilsson, practicing landscape architect; Marie Northroup, housing activist, anthropologist, Almen Arkiv; Armina Pilav, independent artist and researcher; Svava Riesto, architectural historian, University of Copenhagen; Meike Schalk, architectural researcher, KTH Royal Institue of Technology (Meike sent her apologies for not being able to attend); and David Roberts, architectural researcher, University College London.[1]

AGENDA:
SOCIAL HOUSING, ARCHITECTURAL ARCHIVES
AND DESIGN ACTIVISM

This is an account based on seminar conversations between a group of cross-European researchers and practitioners sharing creative, ethnographic and historiographic methods for engaging with architectural archives in the contexts of social housing and design activism. The group convened to explore how archival documents, both existing and yet to be created, can be practical, critical and creative components in the constructive transformation of social housing and neighbourhoods.

We adapt and subvert the meeting minutes format to explore a different way of writing up such an event; 'keeping a record' that explicitly draws out some points and leaves out other points from participants, and valuing minutes as

1   In presenting order at the seminar, we heard from: David Roberts about *Mobilising Social Housing Archives in Regenerating East London;* Armina Pilav about archival practices in war/postwar cities; Gitte Juul about *Situated Planning in Taastrupgaard*; Heidi Svenningsen Kajita about *Impossible Instructions: Inscribing residents' voices in architectural paperwork*; Kris Nilsson about *Management and Care in Practice: the 'archivist' potential. Case: fsb afd. Brønspark;* Rikke Lyngsø Christensen about *Millech's Cabinet: Notes about the systematisation of the collection of architectural drawings at the Royal Danish Library;* Svava Riesto about *How Are Archival Artefacts Used in Contemporary Renewal Projects for Social Housing Neighbourhoods? Two examples and even more questions for expanding the archive and its future uses;* Jos Boys about *Questions on Archiving Matrix Feminist Design Cooperative; and* Marie Northroup/ Almen Arkiv about *Resisting Documents: Tenants produced documents as resistance tools.*

themselves a social, performative genre and process, to be circulated and lead on to continued work (action points).[2]

In a series of individual presentations (by attendees listed above) and joint conversations, attendees shared insights into how archival documents function in the transformation of post war and welfare-state social housing over time as it is planned and designed, produced, lived in, altered, contested and appreciated.[3] In these entangled processes, architectural and related information do not merely pertain to built objects, rather they act among varied actors across disciplinary and professional boundaries, inside and outside institutions; and between desk, archival and fieldwork. In these processes there are many erasures — whether of marginalised voices, memories, or modes of living — via the differential impacts of institutionalised gatekeeping; or conventions about what constitutes an architectural archive; or within a wider political impetus that increasingly frames social housing through narratives of failure and social problems.

In what follows below, we list, describe and leap between the multiple archival practices that were shared in the seminar. The listed items — that run across points raised by individual participants — unfold the myriad ways of attending to archival marginalisation processes, from analysis of the mechanisms of the archive; to making visible loss of historical intentions alongside loss of entire collections and using documents as a material mediation of life; to housing activists' creative use of document aesthetics in their bureaucratic struggles (including making document genres, such as drawing and lists of complaints, act in continuous, ongoing design and maintenance processes.) We play with what constitutes proper and 'improper' evidence, with the intention of making records work for open and diverse purposes, as counter-narratives and to capture methods that make archives a potential tool of change — that is, as documents and processes that can be activated towards more inclusive and just futures. This is informed by diverse sources from the personal, through to practice-based and theoretical engagements.

ITEM ONE:
MECHANISMS OF THE ARCHIVE

One of the overarching seminar questions was how archival mechanisms act to (re)produce norms — about what an architectural archive should contain, about what documents and artefacts are of value, what stories need telling and who has access — and how archives can be reimagined to support and amplify marginalised voices and experiences in social housing histories and futures.

Seminar participants gave examples of how the systematisation of archives effect which historical evidence we can access in the first place. We heard of systematisation of institutional collections that define not only named (often well-known) architects as a primary search category but can also set a hierarchy of architects' relative 'importance' through the way furniture is allocated for drawings storage. The architectural archive becomes a repository of predominantly production and representational drawings which, in turn, affect the conventions of histories developed by researchers. Other kinds of materials, such as business files (often messy) may not be deemed worthy of mention.

How might other kinds of sources offer wider (even speculative) connections and insights, building for example on Ariella Aisha Azoulay's work on 'unlearning' the archives of imperialism?[4] The presence of marginalised communities' voices in the archives — not usually represented in architectural history and practice — challenge not only history writing and narratives, but also the purpose of the architectural archive as only a record of built construction. Again, examples beyond architecture and the built environment offer potential directions.[5]

There is also a matter of who is given access to the archive. Counter narratives require us to rethink not just what is collected and how it is catalogued but also its locations and availability. Open Access platforms and site-based archives (where material is produced and kept, looked after, and accessed in neighbourhoods) are empowering and enable residents and other actors to share stories, memories and personal accounts. But this also raises questions of how such community-based or personally-held archives are looked after, and how they can inform both architectural histories and current practices. The fragility and precarity of non-institutionalised collections are often apparent in their physical condition (for example, residents keeping materials in damp attic spaces through decades, or residents' associations leaving materials in plastic bags in kitchen cupboards). In addition, enthusiastic individuals who collect, curate and act as custodians without resources may struggle to keep up the work and enthusiasm over long periods of time. The Matrix feminist architecture archive grew out of, and continues to survive in, just such precarious conditions.[6]

One Point One: Action Items

•   Create architectural archives that challenge architect-as-star and scholar-centred frameworks. Diversify the use of, and access to, archives and architectural documents.

2   We are inspired by Cornelia Vismann's materialist approach to record keeping. She describes how minutes occupy a space between the oral and written: doubling as both record and act. Cornelia Vismann: *Files: Law and Media Technology,* trans. Geoffrey Winthrop-Young (Stanford: Stanford University Press, 2008): 54.
3   Despite significant differences in public, social and common housing organisation across European countries, we use the term *social housing* here for simplicity and in line with Housing Europe Observatory. See https://www.housingeurope.eu.

4   Ariella Aisha Azoulay, *Potential history: Unlearning Imperialism* (London: Verso, 2019).
5   See, for example, Kate Eichhorn, *The Archival Turn in Feminism: Outrage in Order.* (Philadelphia: Temple University Press, 2013); and Ann Cvetkovich, *An Archive of Feelings: Trauma, Sexuality, and Lesbian Public Cultures* (Durham: Duke University Press, 2003).
6   Matrix Open Feminist Architecture Archive (MOfaa) http://www.matrixfeministarchitecturearchive.co.uk/ See also Jos Boys and Julia Dwyer, "Revealing Work: Interrogating artefacts to (re)view histories of feminist architectural practice," *Architecture and Culture* 5(3) (2017): 487–504.

- Explore open-ended archiving, that recognises that people who have different perspectives also have different practices. Make the archive useful to those that it does not include today.

- Establish continuity and long-term infrastructural support for social housing archives that exist outside of conventional institutional frameworks, for example, within housing associations themselves, or as community (web) platforms etc.

ITEM TWO:
MAKING VISIBLE LOSS OF HISTORICAL INTENTIONS
AND ENTIRE COLLECTIONS

During the course of the seminar it became evident that some documents or even entire collections dealing with social housing questions were simply not available. We heard of a London municipality who lost the entire collection of a housing estate while moving facilities; we learned that whilst documents used to communicate maintenance issues between maintenance staff, landscape architects and residents in a Housing Association in Copenhagen are highly valued in practice, these are unlikely to enter the association's own archive. We heard of how architectural practices own archives varied. Ralph Erskine's UK-based Byker site-office archive was kept in its entirety — boasting a unique variety of documents[7] — whereas collections from their Swedish main office were more restricted. Low use-value and heritage value, storage space, money, practicalities, coincidence, lack of community influence and deliberate ignorance of certain material seem all to influence the disappearance of documentation.

What is lost in these processes? Post WW2 social housing neighbourhoods are often represented in mainstream media in simplistic and stigmatising terms say as 'failures', 'ghettos' or 'concrete jungles'. Meanwhile research and practice alike engaging in these social situations reveal multiple and complex narratives. Whether motivated by autobiographical, community-based story-telling and/or social justice agendas, social housing occupants often have positive contributions to offer about their lived experiences, as well as diverse practices for resisting resource injustices (poor maintenance, unsupported facilities and spaces, ghettoisation and gentrification) which challenge the marginalisation of their voices. What we lose are counter-narratives and a record of community and individual agency in housing struggles. What are the processes through which social housing groups can be enabled?[8]

In addition, what wider archival efforts are needed to make visible — and to act — on this loss? How do we today ensure documentation of what is

7   Heidi Svenningsen Kajita, "Urgent Minor Matters: Re-Activating Archival Documents for Social Housing Futures," *Architecture and Culture* 10:3 (2022), 483–51. DOI: 10.1080/20507828.2022.2093603.
8   Setareh Noorani, Katía Truijen, and Rene Boer, "Housing Futures: An experimental get-together for a rekindled housing movement," *Radical Housing Journal*, 4(2) (2022): 171–182.

happening right now in the history of social housing? Housing activists, local communities, architectural practitioners, and community archives (such as the Bishopsgate Institute in London) were presented as possible drivers of alternate archival practices. And a wide variety of methods for both preventing loss and enabling alternative archives were discussed — from open access platforms and crowd sourced archives to performative methods, academic writing, teaching, site-based practice, co-production, as well as different forms of architectural practice.

Two Point One: Action Items

- Local communities' representation in architectural archives is crucial to give a sense of how architectural communities contribute to define purpose, dignity and continuously changing modes and values of citizenship.

- We need to build on various techniques for site-based co-production of archival material already being explored — working in a locality; local communities co-producing collections; creating connections between several archives; using web-based, crowd sourced approaches; making interactive maps and augmented reality apps as a database sourcing images from the location where things happen.

ITEM THREE:
USING ARCHIVES AND DOCUMENTS AS A MATERIAL
MEDIATION OF LIFE

How do documents reveal 'life'? For archival researchers, documents can give access to certain feelings, such as the feeling of excitement that comes with opening a box of papers and thrusting yourself into someone else's life and work — described by an attendee. Social relationships might be imagined and/or understood through a scrap of paper; and the clues and loose connections suggested can stimulate imagined conversations that might have taken place around the documents. This, in turn, can lead to creative critical approaches to archival practices where the researcher feels challenged and moved to action.

In addition, rather than solitary research, being with others in an archive enables a common endeavour and the sharing of histories, a broadening of what might be considered an archive, not just a collection of documents but potentially a place and/or a practice. For example, sketches and maps produced on site with participants offer forms of recording with those who otherwise communicate via different languages, reflecting their different backgrounds. Comments from residents do not just need to be recorded through formal participatory sessions — an attendee noted that: 'people often don't necessarily show up to the workshops […], they come out and then they ask what are you doing so in that sense I feel like the archive is a living

archive, because it's through the conversation that I get the knowledge from people who live there for 25 years or even longer'.[9]

Three Point One: Action Items

- Value archive research beyond solitary scholarship.

- Create place-based architectural archives that engage with history in the making, including in contested situations.

ITEM FOUR:
ACTIVE USE OF DOCUMENTS IN BUREAUCRATIC STRUGGLES

What do local communities — from residents to facility managers to architects and local planners — find most useful about documents and artefacts in their actions for change? Mundane everyday documents, such as meeting minutes, official letters, and bills all hold information crucial for social housing campaigns. Whilst communities may be collecting materials to document their own story with or without institutional support, constructing a timeline of issued documents such as implementation of laws, various stages of urban plans, local hearings, etc., can double as entrance points for housing activists' actions. This suggests opportunities in making document genres, such as drawings and lists of complaints, act in both the *recording of* and *intervention into* ongoing design and maintenance processes.

Some attendees explored the materiality, function, and aesthetics of documents used in resistance practices. Documents, artefacts, and spaces all perform in relational processes between different actors. Simple techniques such as telephone conversations and walking around neighbourhoods play into how conventional documents are produced at the desk. In addition, by building new archives in the middle of social situations by means of crowd sourcing and co-production of collections, those who were former marginalised in documentation are made visible. Because architectural and planning documents are constructed in specific ways for production and bureaucratic purposes — which often run parallel to, rather than in direct dialogue and communication with, housing tenants and residents — we ask how more messy and relational place-based and community-based processes can make an impact? When should a housing activist's letter have an open feel or an authoritative aesthetic to perform in and thus inform the bureaucratic system, workflows and daily operations? By thinking about, and 'playing with' document genres, for example, complaints paperwork, it can be possible to turn what often acts as a 'blockage' into an unexpected potential mechanism for change. One seminar participant highlighted details from a document registering residents' complaints from 2017 to 2018. This noted, for instance, a resident's allergy to Birch trees — the

9   Comment by Kris Nilsson during the seminar.

process mapped and shared all sorts of detailed and information about the residents' lived experiences and the actions taken, which had the potential to record complex, layered knowledge that could inform future design and maintenance processes.

Four Point One: Action Items

- Diversify architectural document genres: attending to how systematisation mechanisms prioritise some material and marginalise other materials and genres. Consider documents that work both long-term and for immediate purposes, both for mainstream and marginalised purposes.

- Creative and critical practices can challenge who archival documents are useful to, say in performances, exhibition and visual techniques that draw in new audiences and users.

MINUTES APPROVED

This article was shared with the seminar participants and approved by them, although in time honoured fashion (as overworked scholars, teachers and practitioners) many hardly had the time for thorough reading or reflection. As seminar hosts and minute keepers we have shared what we prioritised from the meeting — already to be understood as a historical and partial record, gathering fragments of very different archival practices and perspectives, and now ready for archival interpretation.

Aerial photograph of the JMM2 mountain depot, accidentally captured in 1973, two decades after its decommissioning as a gold depot, when documenting the construction of a nearby wastewater treatment plant. Retrieved from Bildarchiv, ETH Library. Swissair Photo AG, LBS_P1-733921, 24 x 24 cm, black and white, 06.04.1973.

Ludo Groen (ETH Zürich)

In Search of Architecture in Non-Architectural Archives: Learning from the Archive of the Swiss National Bank

If you really want to hear where to find the Alpine vaults of Swiss banks, and what they look like, the first thing you should probably know is that the archives of almost all banks in Switzerland are not publicly accessible, and even when they are, the last thing you will find there are architectural drawings.[1] Your best hope are illegible scribbles, in the margins, on the backs of papers, overlooked by archivists, because everything that does resemble a floor plan or section could compromise the security of still in-place infrastructures, and has therefore been excluded from the archives. After two years of combing through piles of correspondence, annual reports, and meeting minutes in the archive of the Swiss National Bank, one such document stood out. A yellowed bedraggled piece of paper of approximately 15 by 21 centimetres that, considering its serrated edge, must have been hastily ripped from a block note. On top of the thin blue-lined grid, there is a palimpsest of data, five consecutively applied layers, bleeding off every corner of the paper. In sharpened graphite grey pencil, the nine lines are ruler-straight, not veering to left or right, clearly from the hand of a precise, fastidious person. They make up a rectangular space, an underground cavern, the mountain side accentuated by a hatch, pierced by two access corridors. An assumption confirmed by the fat red pencil, handwritten, probably during a site visit, annotating the space's internal dimensions of 8.5 by 7 metres.[2]

Back at the office, the torn piece of paper was inserted into the typewriter of one of the bank's secretaries. The drawing was dated as October 13, 1939 (six weeks after the start of the Second World War), and clarified with a caption: 'the layout of the space available to us is approximately as follows'. The 'us' refers to the document's author, who signed his drawing with 'Bl' in blue pencil in the right bottom, like an architect signing a drawing. The same 'Bl' features on the banknotes that the National Bank issued the same years, and belongs to its Chief Treasurer Erich Blumer. On top of the memo there is a red-typed codename, JMM2, a presumed military abbreviation of 'Interlaken Munition Magazine 2'. The same moniker can be found on later correspondence in the archive: 'a gallery intended for

1   Sentence structure borrowed from opening line J.D. Salinger's *The Catcher in the Rye*: "If you really want to hear about it, the first thing you'll probably want to know is…" J.D. Salinger, *The Catcher in the Rye* (London: Penguin Modern Classics, 1979).
2   The sources used for this paper are retrieved from the public Swiss National Bank archive, especially from dossiers relating to the evacuation of assets during the Second World War, unless mentioned differently.

the storage of ammunition, the rear part of which was separated from the front part by a brick wall and made available to the National Bank after the beginning of the war in 1939. It is the westernmost of 6 ammunition sites at the entrance to Interlaken'. Finally our suspicion is confirmed, the sketch represents one of the highly secret Alpine bunkers where the National Bank during the war stored its gold and other valuables. But the caption also reveals a new piece of intel, an indication of its location near the town Interlaken in the Bernese Alps.

This is where another archival research method can assist. There is a vast amount of historical aerial photography digitised over the past decade, sometimes even geo-tagged, floating around somewhere on the internet. In Switzerland, a lot of these are shots by the military pilot and photographer Walter Mittelholzer, who in 1934 founded Swissair Photo AG as a subsidiary of the eponymous airline carrier. At that time, aerial photographs were primarily sold to tourist offices and magazines, marketing the panoramic and, until then, unknown angles of famed mountain ranges. Interlaken was a tourist hotspot and therefore regularly portrayed from above by Mittelholzer and his aviators. But focusing a camera from a moving plane required an incredible dexterity, such a difficulty that cautious photographers often included major parts of the background and cropped the relevant details after.[3] The by-catch of a bird's eye view of Interlaken-West offers a glimpse of what looks like six concrete bunkers, extending out of the rock with a canopy.[4] The photographer must not have been aware of its background presence as, since 1938, federal law prohibits the documentation of military objects, via photographs and other techniques. But once again, in the margins of archival documents, one can find proof of their existence.

Moreover, an image recognition tool can help navigate this vast amount of digitised archival photographs which is available online. While the depot in Interlaken was used to safeguard gold during the Second World War, the National Bank used another bunker in Amsteg, along the Gotthard Pass, for the storage of banknotes.[5] There is one particular archival photograph of that place that widely circulates online, depicting the alleged entrance to the bunker. By uploading that image to Yandex's reverse image search engine, its algorithm retrieves a larger collection of identical photographs of the same bunker, among which stands out an image of a storage room whose characteristics match the other mountain depots used by the National Bank.[6] The images originate from a military photo collection in the Federal Archives, but are neither indexed nor sufficiently labelled, making them therefore impossible to find with a conventional archival query. After the open-source platform Wikimedia scraped them from the archive and posted them online,

3   Michael Gasser and Nicole Graf, *Swissair Luftbilder / Swissair Aerial Photographs.* (Zürich: Scheidegger & Spiess, 2014), 39.
4   Bildarchiv, ETH Library. Swissair Photo AG, LBS_P1-733921, 24 x 24 cm, black and white, 06.04.1973.
5   A letter dated March 6, 1951 discusses the technical requirements for the new K10 bunker, and refers to the exact dates that the bunker in Amsteg was previously used. SNB Archive, dossier K10, uncatalogued.
6   Swiss Federal Archives, E5792#1988/204#1302*, 1939–1945.

not fenced off by an identification procedure as is the case with the Federal Archives, the image showed up in the reverse image search. This is an example of how the digitisation of archives and its subsequent algorithmic analysis introduces new ways to access archival materials. Sources normally obscured due to incorrect or insufficient labelling, suddenly become retrievable through the power of image and text recognition tools.

These are just a few haphazard strategies to seek architectural evidence in non-architectural archives. In order to contain the laborious and costly practice of archiving, the bureaucratic mandate of archives, that defines what to collect, is often tightly framed, whether it is limited to a field such as architecture, an institution such as the National Bank, a territory such as a municipality, region, or country, or to particular types of documents such as meeting minutes, correspondence, and annual reports, or architectural drawings and models. The current shifting gaze in architectural history, away from single authorship towards more global, collective, and decolonial practices underrepresented in the canons of the discipline, often requires archival research to go beyond these instituted frames, as their scale extends beyond regions, their expertise transcends disciplines. The disciplinary disaggregation of the fields of architecture, landscape, and urban design further complicates the archiving of large-scale infrastructures, such as the ones of the Swiss gold storage in the Alps, that are the result of complex political, military, technological, and design decisions.

The same can be said of one of the most designed landscapes in the Netherlands: the polder, which documentation is not necessarily found in the archive of architecture and urban planning, but more so in laws and policies in the Dutch National Archive. In this context, it would be easy (and perhaps not entirely fair) to question to what extent strictly geographically or disciplinarily defined archives such as the one kept by the Nieuwe Instituut, mandated to collect Dutch Architecture and Urban Planning, are still relevant repositories of source material for the production of knowledge in the field of architecture and urban planning. The geographical adjective of 'Dutch' refers to the domicile of authors, a distinction that with the internationalisation of practice becomes increasingly arguable. Why is it that the work of Dutch practitioners abroad is present, while the work of foreign architects and urban planners in the Netherlands is not? Besides, the disciplinary boundary of architecture and urban design seems increasingly hard to defend, as their practice and theory increasingly blur with other fields.

The Nieuwe Instituut would be the first to acknowledge these shortcomings, being an interdisciplinary institute itself since the merger of the national institutes of architecture, design, fashion, and digital culture in 2013. The recent acquisition of the archive of a landscape architect has demonstrated this, setting a precedent for an entire field to be represented as well, which would require a significant increase in financial and human resources. But also, within the current collection, the disciplinary focus excludes various types of documents. You might find countless revisions of the same drawing signed by the architect, but hardly any drawings by the structural engineer. If

these were to be saved from the trash bin as well, the archive would double its size. And even if we were to change this acquisition policy, archives are by nature inert, non-agile, and dependent on their donors, making the process of shifting the focus of a collection—for better or worse—a slow, patient process.

One of the ways the thresholds between these strictly disciplinary, or geographically bound archives can be lowered is the earlier mentioned digitisation and the sharing of its data and metadata with other archives through standardised protocols like Linked Open Data (LOD). In such a networked approach, each institution can maintain its own collection policy, but together these distinct puzzle pieces allow a broader, multi-vocal view. In the context of this particular research, one of the downsides of digitisation is that this not only allows the researcher to faster navigate large amounts of data (for example by searching for keywords in OCRed documents), but it also empowers its keeper to tighten access regimes. In the Swiss National Bank, the minutes of the weekly Governing Board meetings are all digitised and searchable from a local computer inside the bank. The researcher cannot bring this digital file home, only hit the print-button, and paradoxically, take its physical copy. To what extent this digitisation helped the bank to restrict access to sensitive dossiers is unclear. The dossier containing Treasurer Blumer's drawing was not yet scanned, otherwise a trained algorithm could have recognised and red-flagged terms such as *Grundriss* (floor plan). Or if the sketch was scribbled on the backside of Blumer's notes, it would likely not have been digitised at all, as the archive does not scan the backsides of papers. But once a file is digitised in (for instance) the Swiss Federal Archives or the Dutch National Archives, physical files can no longer be ordered to the reading room, further complicating finding sensitive materials in the margins of archives.[7]

Not only the content, but also the access to these archives is carefully regulated. The Swiss federal law on archiving stipulates that documents are sealed for thirty years after the closure of the file, or longer if they contain 'an overriding public or private interest worth protecting'.[8] But this law does not extend to private archives, such as the ones held by commercial banks, which are only accessible to the bank's own employees. As a result, their histories are often written by in-house historians on the payroll of the bank.[9] Besides producing a celebratory monograph, the companies consider maintaining these archives as unnecessary expenses, or even a threat to business secrecy.[10] This reluctance of corporations to make their archives public, will become more relevant as well to the Nieuwe Instituut, as it

continues acquiring the work of offices produced during the 1990s, an era in which architectural and urban design practice rapidly professionalised and financialised. When acquiring the archives of OMA and MVRDV (respectively around 2004 and 2015), mainly materials older than 10 years were included. That was not only because of the interest of archivists in their earlier work, but also connected to non-disclosure-agreements and greater economic interests at stake in the more recent projects. During the latest exhibition at the Nieuwe Instituut on the archive of MVRDV, access to the born-digital archive of their last twenty years was generously provided, but only from a workstation at the office and after the approval of the business and development department to make sure the files were not subject to legal restrictions.

Rather than revealing where and how the Swiss banks stored their gold in the Alps, this paper sought to reflect on consecutively researching the archives of MVRDV and the Swiss National Bank. Researchers seeking materials that prefer not to be found, encounter similar hurdles in both archives, in which the imminent digitisation brings forth both opportunities and challenges in terms of acquisition, access, and research methods. Paradoxically, drawings, one of the most confidential materials in the archive of the banks, are the most ubiquitous in architectural archives, while vice versa, spreadsheets, the documents that fill the majority of the racks in banks are almost entirely excluded from the archives of architects, similarly for reasons of confidentiality.[11] This raises the question whether the keeping of exclusively disciplinary mandated archives is still relevant, or that what really matters is how connect all these distinct repositories of historical evidence to each other.

ACKNOWLEDGEMENTS

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7   For a critical reflection on the process of digitisation in the Bern State Archives, see: Thibaud Giddey and Benjamin Ryser, "Die süsse Verlockung. Zugänge und Herausforderungen mit zeitgeschichtlichen Quellen im Staatsarchiv Bern," in *Traverse*, (Zürich: Chronos Verlag, 2023), 98–105.
8   Swiss Federal Law on Archiving of June 26, 1988.
9   For example, in his capacity as chief historian at Credit Suisse until 2014, Joseph Jung published various monographs on Credit Suisse and its founder Alfred Escher. Given the restricted access to the private archives of Credit Suisse, his writings are the main reference for the company's history.
10 Alexandre Elsig, Thibaud Giddey, Malik Mazbouri, "Le goût amer de l'archive. Éditorial." in *Traverse*, (Zürich: Chronos Verlag, 2023,) 12–13.

11 In the archive of MVRDV, kept by the Nieuwe Instituut, there is only four small dossiers from the office's administration, one of them being a cashbook from one of the first years of its founding. When asked about this document, one of the founders, Nathalie de Vries, was worried about the sensitive content of the cashbook. Het Nieuwe Instituut, Rotterdam, MVRDV / Archive, inventory number MVRVTP000.1.

3D Rendering of a spatial installation about storytelling through the three archives exhibited.

Smaro Katsangelou (Florida Atlantic University)

Museum-Archive in Polygyros, Chalkidiki, Greece: New Technologies, Exhibition Design and Archival Research

STEPHANOS KOTSIANOS' VERNACULAR MANSION

Polygyros is a village in the foothills of Mt. Holomontas at an altitude of 560m., in the peninsula of Chalkidiki, one of the main tourist attractions of northern Greece. The first mention to Polygyros can be found in a document at the Iberian Monastery of Mt. Athos, which dates to 996 A.D. Polygyros became part of the new Greek State in 1912 and has been the capital of the Municipality of Chalkidiki ever since.

The vernacular mansion of Stephanos Kotsianos is located south of the main pedestrian way in the old settlement of Polygyros and was built in 1894 according to an inscription found in situ. It is a complex of particular interest that showcases the development of the Greek economy from rural to urban. Located in the historic centre of Polygyros, it consists of three floors, built out of stone, as well as several open spaces destined to serve the processing of wheat and grapes. The mansion has an irregularly shaped floorplan, adapting to the significant difference in height between the two sides of the plot. Consequently, the building has two floors in the façade facing the street, whereas on the opposite side, surrounded by a yard, there are three floors. In the open space around the building, a two-meters stone fence limits the view from the road and protects the facilities which were used to make wine, flour, and silk.

In the 1980s, half of the building was donated to the Municipality of Polygyros, which triggered the acquisition of the rest of the building by the Municipality. According to the study for the Renovation and Reuse of the building, carried out in 2015 by the Technical Service of the Municipality, the mansion and its surroundings are being restored to be reused as exhibition spaces. Following a series of discussions, inquiries and collaborative design meetings, the Municipality agreed to use the space as venue for three different archives that had been acquired, as well as to host educational and cultural programs and activities.

Stephanos Kotsianos' Personal Archive

The first archive constitutes the personal collection of former Member of Parliament Athanasios Stephanos Kotsianos. Stephanos Kotsianos was

born in 1908 in Chalkidiki. He went on to study Law in Athens and later in Paris. Part of his archive documents the time he spent in Paris, relevant to his interests and pursuits as a lawyer as well as a politician. He got elected as Member of the Greek Parliament in 1951. His archive contains a big and versatile array of artefacts, which underline his multifaceted personality and interests. It comprises of 270 folders of newspaper articles on politics and scientific matters, 65 folders of personal documentation, correspondence and important documents, 10 volumes of his writings, 4 chests with legal documents and cases which he had handled as a lawyer, as well as 21 cardboard boxes of bookkeeping.

The Archive of 'The voice of Chalkidiki' Newspaper

The second archive, *The voice of Chalkidiki*, dates back to April 20th, 1930. The founder of the newspaper was Nikolaos Christou Yerochristou, born in 1899 in Taxiarchis, Chalkidiki. He attended junior high school in Polygyros and went on to create his own business in 1930, initially a bookstore and a print shop, located in the historic settlement of Polygyros. The premises where the paper was being printed still exist in Polygyros. The newspaper *The voice of Chalkidiki* was published from 1930 up until 1961, when its founder died. Later, the publication of the paper continued through his heirs until 1977. After 1977, the paper ceased to exist but, thanks to the founder's son contribution, most of the newspaper's physical copies were retrieved. More than 1494 newspaper sheets are now part of the archive: 136 of them date from 1930 to 1936, 344 were printed between 1945–1959, 865 between 1960–1969, and lastly 149 date to the 1970s.

Archive of Polygyros' Local Photographer Argiris Vogiatzis

Argiris Vogiatzis, born in 1907, was a self-taught photographer who kept the only photography shop in Polygyros from the 1920s until 1982. His visual documentation of the life and people of Polygyros became one of the only and most significant primary sources of information for historians. Vogiatzis archive was acquired by the Municipality of Polygyros in 1983, one year after Vogiatzi's death. The archive was at times stored in spaces with high humidity and inappropriate conditions, which consequently resulted in the ruin of part of the documents. In total, the material comprises 1500 photographs and 500 negative films. The physical photographs would have to be evaluated and restored by a certified professional to stabilise and ameliorate their physical condition. In addition, specific recommendations should be made to determine the ideal storage conditions, avoiding further damage.

ARCHIVES IN THE 21ST CENTURY

Archives first emerged in private collections dubbed *Cabinets de Curiosités*, *Wunderkammer* or *Cabinets des Merveilles*, which constitute the first

collections of the 16th century, containing a wide range of objects and souvenirs. These *curiosities* would be stored, preserved, exhibited, and reinterpreted by the viewers. In this sense, archives are interwoven with the past, but also play a critical role in shaping a place's future, because they contribute to explore answers, pursuits, and responsibilities towards future generations. In 'Archive Fever', Jacques Derrida deals with this dual existence of archives as a strong element of their power.[1] Archives show the human need to safeguard written and other important materials, as well as the need to share them with others, a dualism that extends to the ways in which archivists and researchers use and interpret archives. For archivists, an archive constitutes a treasure that should be preserved and maintained, whereas for researchers it is a field for exploration and experimentation, through which new views of the past can emerge. An archive should be ultimately viewed as a composite amalgam of interpretations and approaches to the past, rather than a complete and infrangible continuum.

From the 2000s onwards, the digitisation of numerous archives in Greece has been an ambitious and demanding project, which continues to this day. The project 'Digital Convergence 2007–2013' has contributed to the digitisation of nearly four million pages of material from 1821 to 1923.[2] The General State Archives of Greece has an expanding agenda of digitisation projects focused on the historic period spanning from the Greek Revolution to mid-20th century.[3]

Archival material is an integral part of human existence which, amidst rapid technological development, has been omitted from the vast repository of human activity and culture that is the Internet. Digitisation and the creation of digital, open access repositories have been a milestone in the democratisation of archival material, moving away from their initial conception as collections reserved for the initiated few. Digitisation is the first step towards free and unconditional access to a vast number of information, which has survived for several centuries.

Recently, a new stream of research has emerged through the development of new technologies such as artificial intelligence. Deep learning algorithms have enabled the interpretation of visual and written archives under a new artificially augmented light.[4] Pattern recognition is an essential function of Deep Neural Networks and can be used to address different types of archival research. From 2015 onwards, the world of artificial intelligence has been revolutionised by research carried out regarding deep neural networks.[5] The focus of archivists' profession is destined to shift from

1   Jacques Derrida and Eric Prenowitz, "Archive Fever: a Freudian Impression", Diacritics 25, No. 2 (Summer 1995): 14
2   See more about the project: https://www.mfa.gr/en/diplomatic-and-historical-archives/the-archives-today/digitization-of-archival-material.html
3   See more about the agenda of General State Archives: http://www.gak.gr/index.php/en/menu-en/our-activities/projects-and-programmes
4   Stanislas Chaillou, Artificial Intelligence and Architecture: From Research to Practice (Basel: Birkhauser Verlag, 2022): 95
5   Giovanni Colavizza et al. "Archives and AI: An Overview of Current Debates and Future Perspectives", Journal on Computing and Cultural Heritage 15, No. 1 (December 2021): 5

a profound knowledge of an archive, towards narrative and critical interpretation of the material.[6] a prerequisite for processing archives through deep learning algorithms is labelling. The labelling of the three discussed archives has been completed within the 'Digital Convergence 2007–2013' project and is freely accessible online.

MUSEOLOGICAL APPROACH

The notion of archives as well as their actual physical aspect, have been a point of departure for artworks that approach the human need of creating, preserving, and passing along information. The main concept for the design of the museum was the creation of interactive and digitally enhanced spatial experiences that narrate stories on the material encountered in the archives. The aim was to explore the three archives on two distinct levels. Firstly, through deep learning algorithms, with which the archival material, be it photographs, newspapers or correspondence, was classified, clustered, and visually represented in a way that visitors and researchers alike could navigate. Big breakthroughs in visual pattern recognition include Yale's Pixplot project, a convolutional neural network, which clusters visual material based on patterns identified from the material it has been trained on.[7] Secondly, through spatial installations that address highlights and selected narrative stories extracted from the archives' ensemble. These installations provide the visitor with a general as well as focused outlook of the material that is stored in the Museum.

The main entrance of the museum is located on the ground floor of the building, where Stephanos Kotsianos' personal archive is presented, showcasing stories from his childhood, studies in Paris and professional career. A deep learning application trained on Kotsianos' photos and voice recordings of his public speeches is exhibited as an introductory look into his personality and interests. Circular configurations are used throughout the exhibition spaces to conceptualise the concept of a continuum of information and research material, which bring the past and present together.

The entirety of *The Voice of Chalkidiki* newspaper is presented on the same floor, through digital screens where visitors can navigate through the sheets, labelled, and classified by year. At the same time, the physical artefacts are stored in Bruynzeel custom-made storage units that enable potential researchers to get a closer look at the material. In the same space, stories in the cover of the newspapers have been selected, describing local customs and celebrations. Through this analysis, the place's traditions are showcased in an implicit way that lets the manners, language, and mentality of the time shine through. The choice of subjects and events presented in the frontpages of the paper of the time are indicative of how.

6   Kate Theimer, "It's the end of the archival profession as we know it and I feel fine", in Archival Futures, ed. Caroline Brown (London: Facet Publishing, 2018) 1–18
7   See more on: https://dhlab.yale.edu

In the circulation spaces of the building, light and print installations unify the different segments of the exhibition, setting the tone for the rest of the museum. The basement of the building, formerly reserved for the processing and storage of flour, wine and other products, has been used to present Argiris Vogiatzis' Photography Archive, as well as an interactive installation titled "The archive of the Future". For the photographic archive of Polygyros, Yale's Pixplot application has been employed to classify and cluster the retrieved and digitised images. In order to emulate the environment of the actual photography studio, mirrors have been used to create the illusion of an infinite space. For the "Archive of the Future" installation, which tries to interpret the archive as a continuum of streams of information, screenings of archival material move in different directions according to the density of visitors in the room, which is monitored through motion sensors.

On the 1st floor, the three archives are presented as a palimpsest of information through a maze-like circular layout that illustrates stories from all three archives, which have been pivotal for the history of Chalkidiki. This open space is reserved for a more immersive and focused narration that highlights events of the village's history. Some material artefacts are exhibited in eight modular displays which form a full circle when put together. These displays act as the central focus of the room. Around the displays, lightboxes are hung from the ceiling at different heights, depending on the different hosted events.

CONCLUSION

Contemporary museological theory and practice has shifted museums' focus from object-centred to human-centric. This has affected the way collections and archives alike are treated, now approached as a vehicle for story-telling and research with intriguing and non-canonical foci. Thanks to new technologies, the breadth of archives of all sorts can be navigated in a more efficient, user-friendly manner, artificially augmented analyses which enable new conclusions and observations. The three archives are approached through abstract spatial installations, which look to emulate the ambiance of the material encountered throughout the archival research conducted in order to design the museum. More specifically, the material is deconstructed and resynthesised to offer focused, anecdotal stories, representing what the press and intellectuals were consumed with in different times from the 1930s to the 1970s. Moreover, many observations of anthropological, aesthetic, politic and ultimately historical nature can be drawn from the archive, which are used as a point of reference for creating spatial 'moments', centred around isolated or recurring events.

The archives are analysed in multiple scales. Deep learning applications are used to draw observations about the entirety of these three distinct archives and let researchers and visitors alike take a closer look in the material exhibited and stored in the vernacular mansion. In the emergent field of digital humanities, the use of artificial intelligence has proliferated

in recent years, as a way to discover recurrent patterns and similarities in large sums of data.[8] Simultaneously, spatial installations serve as interpretations of some of the most culturally and historically significant material encountered. This methodology contributes to constructing an intriguing and comprehensible narrative, which is easy to follow for visitors in the span of 45 minutes. Finally, the biggest question while designing this project was how one can spatialise and embody what is traditionally considered dull and mundane. In other words, how can two archives with little to no visual interest become the foci of a permanent exhibition addressed to the community of Polygyros and toursists alike? Moreover, one recurrent question throughout the design process was how the images discovered in the photographic archive be structured to create an appealing story and exhibition. Through this project, the nature of the material partially dictates the narratives presented within the exhibition. Simultaneously, a multidisciplinary approach to design is adopted, bringing together deep learning and new technologies used in digital humanities to classify vast sums of information, as well as spatial installations, destined to artistically depict some of the information encountered through the archival research.

8   Amanda Wasielewski, Computational Formalism (Massachusetts: MIT Press 2023): 57
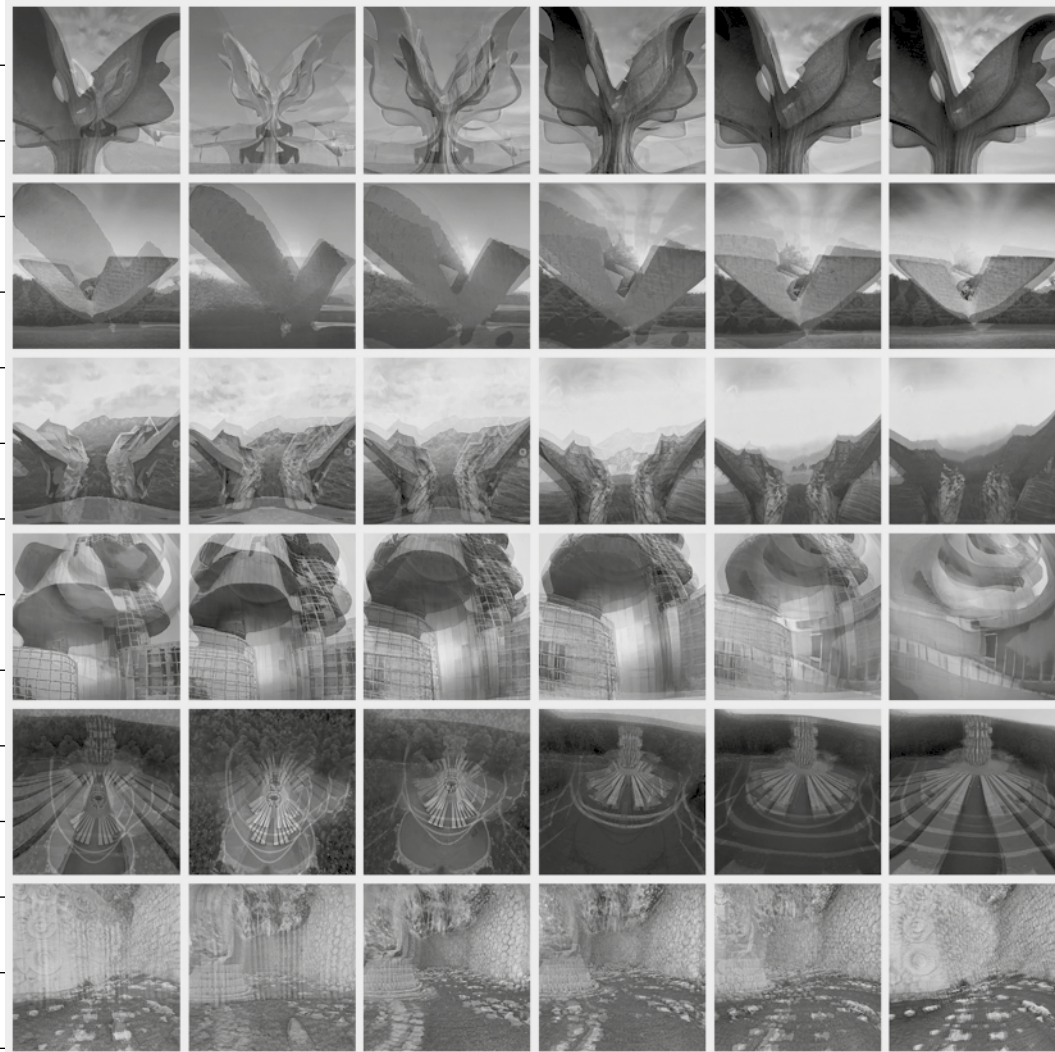
Stills from *The Pilgrimage* videos by the Critical Broadcasting Lab, 2023.

Ana Miljački (Massachusetts Institute of Technology)

Bootleg Archives: Lessons from Exhibiting Unsanctioned Architectural 'Heritage'

Recent definitions of archives abound. Archives have been understood as inextricably linked to buildings, and institutions, as status itself,[1] or as governing the 'laws of what can be uttered'.[2] In architecture, they have been understood to include the living, material artefacts, as well as 'documents' in various media.[3] We have been having an 'archive fever',[4] contending with what it would mean to transgress its constitutive limits,[5] by expanding it, by ignoring its authority, and trespassing its boundaries, and wondering what might be the political use of 'slow archiving'.[6] When archives have most recently, explicitly entered architectural exhibitions, the outcomes have been described as 'the cliché of the archive-as-artwork',[7] or as simply 'too much information'.[8] And yet, one of Jacques Derrida's famous conclusions on the topic, that the 'archive should call into question the coming of the future', rings particularly urgent as we mobilise the material included in it, its blind spots, gaps and omissions, towards critical ends—indeed towards possible futures.[9] The urgency of this request is only exacerbated by the fact that a digitised archive is already being rendered for future uses by a vast army of low and high grade AI operations, anticipating our deepest individual desires, market transformations, climate crisis, extinction tolls, and latest political polls.[10]

1   Achille Mbembe, "Power of the Archive and Its Limits," in *Refiguring the Archive* (Dordecht: Kluwer Academic Publishing, 2002), 19–26.
2   Michel Foucault, *The Archeology of Knowledge and The Discourse on Language* (New York: Pantheon Books, c. 1972).
3   Felicity Scott, "Architects do Not Make Buildings They Make Documents," Learning from "Documenting the Colonial Archive" with Felicity D Scott, The Berlage, Delft (May 04–16, 2019), included in *text-catalogue*, https://textcatalogue.com/portfolio/learning-from-documenting-the-colonial-archive/.
4   Jacques Derrida and Eric Prenowitz, "Archive Fever: a Freudian Impression," *Diacritics*, Vol. 25, No. 2 (Summer, 1995): 9–63.
5   Saidiya Hartman, "Venus in Two Acts," *Small Axe*, *Number 26*, Vol. 12, No. 2 (June 2008): 11.
6   Sven Spieker, "Manifesto for a Slow Archive," *ArtMargins* (January 21, 2006), https://artmargins.com/manifesto-for-a-slow-archive/.
7   Adrian Forty, "Fundamentals: Biennale Architettura," *Journal of the Society of Architectural Historians*, Vol. 74, No. 2 (June 2015): 266–268.
8   Sylvia Lavin, "Too Much Information," *Artforum*, Vol. 53, No. 1 (September 2014).
9   Derrida and Prenowitz, 26.
10   Curtis Roth has written compellingly about the intersection between selfhood and algorithmic prediction. For example, Curtis Roth, "Anthropoforming, Or Living with Ourselves," in Ashley Bigham (ed.) *Fulfilled: Architecture, Excess and Desire* (San Francisco: Applied Research + Design Publishing, 2022) 48–59.

OFFICEUS: CONSTITUTING THE BODY OF THE US ARCHITECTURAL PRODUCTION ABROAD

In my curatorial work I have mined, constructed, sidestepped, and represented architectural archives (understood in a variety of ways). For *OfficeUS*—project that represented the US Pavilion at the 14th Venice Biennale curated by Rem Koolhaas, for which I was one of the chief curators managing a team of nearly 25 researchers at MIT—we crunched big data by hand, scanning and reprinting hundreds of thousands of magazine pages, we gathered documents and images from archives, photo agencies and architects themselves.[11] This project was simultaneously looking backward and forward, it included a 'repository' of historical projects and firm narratives, a 'live' office of eight 'partners' working in the space of the pavilion for the duration of the biennale. Having started with two very large numbers, the proposed 100 years of modernity, and 1000 projects by US architectural firms abroad, we aimed to sidestep and undo various canonical narratives, with their celebrated heroes and discourses, and turn the stage into a mirror of 'the good the bad and the ugly' architecture that found its way to various corners of the globe, to various markets, under the flag of US industrial, diplomatic and economic interests. The way we posed the question included a deliberate flattening of the field (of the archive), such that we could all begin to see configurations in it that have been obscured by the cannon. We reviewed over 2300 projects and ultimately included 169 offices and 675 projects, relying for this on historians' toolkits: following footnotes, compiling excel sheets, reading form and quality, considering labour and various lines of expertise, checking sources, combining physical and digital archives.

OfficeUS did not present 'every significant project since 1945 [sic] by an American practice outside the United States,' as Adrian Forty described it in his review of the Biennale for *JSAH*.[12] Aside from the chronological error, his very idea of 'every *significant* project' exhibits an assumption of the survey mode that we distinctly did not share.[13] It also implies that the narrative and the history of US architectural export in the last century already exist as such. We included project we thought were key for illustrating narratives of political and economic compromises, ever greater office size and efficacy, the common delusions of profit-disinterested technical help and conversely necessary autonomous disciplinary advancement. We indeed went through 2300 projects, case by case, discerning, first, their relevance to particular, global narratives; second, their capacity to open up new historiographical and political questions in dialogue with other selected projects (and offices); third, their possible architectural interest (historical and contemporary). In *OfficeUS*—on the walls of the US pavilion densely packed with binders that together contributed to a single *supergraphic* of

office portraits and changing skies—the body of US Architects work abroad quite literally emerged into view, and so did a digital database, a now minable 'big data' picture of that body of work.[14] As is the case with all big data, as well as with all long durée projects—including those crunched by hand—the key hope is that big historical patterns will become discernible. It is through encountering a team of architects working through some of this important baggage in various ways in the pavilion—for the duration of the Biennale—that we hoped individual visitors would access the depth of specific issues. The new work produced by the 'office' on the ground, and the possible engagement of the exhibition goers as curious researchers themselves, both fulfilled the necessary dialectic of the long-short durée, and thus provided a basis upon which future work could be produced, both during the Biennale and afterwards.[15]

THE PILGRIMAGE | PIONIRSKO HODOČAŠĆE: SYNTHETIC MEMORIES

Since then, the Critical Broadcasting Lab (CBL), established in 2018, has been involved in different ways of probing architecture, chipping at its various hero-stories and raising red flags where/when they needed to be raised. Diverse media, including exhibitions, fall under its umbrella of broadcasting, in fact those two words have been deliberately made interchangeable in our work. Most recent CBL's work has been contending with the inevitable, and by now unstoppable, symbiotic relationship between the digital archives and the AI technologies. In the larger (umbrella) project titled *Bootleg Futures*—we have been experimenting with the augmentation of historical and contemporary archives, sometimes altering the data through deep fake technologies in video and audio and feeding it back into the data streams that govern architecture's communication ecologies, and at other times using the predictive dimensions of AI to visualise (with humour and critique) the historical tendencies that define our contemporary moment.

The title of this umbrella project responds to a figment about the future. Having fed our private and collective data to various information gathering/scraping corporations, and, having turned history into databases to be devoured by predictive algorithms, most of our actions, including the ways we imagine and shape the built environment, will surely be predicted by various types of AI technologies. This means that our discipline's Eurocentric, progressivist, genius, male architect narratives will take up a big chunk of those archives now mined to narrate and possibly determine our futures. In fact, the Midjourney generated worlds that are beginning to flood student projects are already tainted by the politics of the archives they access. But what if we tweaked, hacked, and strategically added new (as well

11   Three chief curators of the US pavilion for the 2014 Venice Architecture Biennale were Eva Franch i Gilabert, Ana Miljački and Ashley Schafer.

12   I presented on our *OfficeUS* research and curatorial work with the associate curator on the project, Michael Kubo, at the annual meeting of EAHN in Dublin in 2016. We described our process as 'big curating' in opposition to the dominant historical exhibition format, the historical survey, with all of its proselytising and evaluative connoisseurship overtones.

13   Projects and offices in our timeline went back to 1853.

14   The images on the covers of our binders follow the developments in both photography and architectural markets for US firms. One can follow them in tandem: from black and white, sunny, high contrast early Venezuelan SOM projects, through the Kodachrome, sandy Middle Eastern desert in the 1970s, to bright blue backgrounds of HOK 2000s supertalls in Asia.

15   In this way we sought to fulfil Mirko Zardini's key definition of curatorial practice as 'concerned not only with the production of knowledge but also, and above all, with making this knowledge productive'. Mirko Zardini, "Exhibiting and Collecting Ideas: a Montreal Perspective," *Log* 20: *Curating Architecture* (Fall 2010): 82.

as forgotten) data into the stream of conversations about architecture? When decoys, minor narratives, and mirrors enter the data set, any future reproduction or AI-based prediction of the future will have to contend with them. These are some of the larger questions that interest us at the intersections of archives, AI, architecture and broadcasting, and are at work in the most recent exhibition produced by the Critical Broadcasting Lab, included in the European Cultural Centre's exhibition *Time, Space, Existence* in Venice on the occasion of the 18th Architectural Biennale in Venice curated by Lesley Lokko: *The Pilgrimage | Pionirsko hodoča*šć*e*. This piece is produced through unsanctioned copying and distribution of the past. We have invited both private memories and AI to play roles in this personal, and (hopefully you will agree) tender project.

Amidst all kinds of grim news during the summer of 2022, a story lit up a small corner of the social media landscape and news outlets in the ex-Yugoslavian region. The Partisan Memorial Cemetery in Mostar, Bosnia and Hercegovina, was vandalised. All 630 gravestones dedicated to fallen soldiers in the Second World War, part of a remarkable memorial land-artwork by famous local architect and monument artist Bogdan Bogdanović, were destroyed in the night of June 13, 2022. In Yugoslavia's historical 'laboratory of the future', socialism, self-management, tolerance, and inclusion intersected in various ways with architectural imagination.[16] Today, the artifacts that constitute Yugoslavia's socialist architectural heritage, and especially those that were instrumental in the ideological wiring of several post-war generations for anti-fascism and inclusive living, have been swallowed by the entropic appetite of ageing collective memory, exacerbated by various forms of local and global political investment in forgetting their meaning. But, for those who choose to claim citizenship in the idea of Yugoslavia, now thirty years after its destruction (and do so precisely in opposition to crude transitional capitalism and its related nationalisms), memorials like the Partisan Memorial Cemetery in Mostar serve as navigational devices, both backward into history and forward into the future. Private memories of pilgrimages to the memorial sites they mark are as anachronistic in contemporary society as these objects themselves. And yet, if this anachronism is a way to anchor anti-fascist and transnational collectivity, they must be protected. Or, at the very least, remembered.

The Pilgrimage synthesises 'memories' from Yugoslavian elementary and high-school visits to these memorial monuments, offering them in a shifting and spatial multi-channel video presentation, accompanied by a non-linear documentary soundscape. Private photographic and video recordings, official archival images from ex-Yugoslavia, and archives assembled by expert historians were fed to a Generative Adversarial Network, a model of deep machine learning, StyleGAN3 which was made widely available in 2021. Our AI 'Stane' (StyleGAN3) has been trained on archival and individual photo documentation of six specific memorials so as to output a series

of video interpolations based on them. There is a lot of manual and digital synthetisation in this process. In order to produce the video component of *The Pilgrimage* we assembled many different dataset collections, and then in order to arrive at the results and effects we desired, we trained Stane with different paraments, removed images from training sets, adjusted the order in which the 'seed images' in its 'model' were organised; we added, subtracted, and adjusted manually to get the results one can see in the final video. The accompanying documentary soundscape holds the experience together in space. At moments it enables figuration of the (pre 1990s) soundscape of Yugoslavia, as well as those group school visits to the memorials.

The six monuments currently included in the project are but a sampling, chosen for their likelihood to have been visited by Yugoslavia's youth up until 1991, and thus most prone to resonate with the messages of anti-fascism and national brotherhood.[17] In offering its synthesised memories of the lessons for the future that the original memorials were meant to carry, *The Pilgrimage* also presents antifascism and unity as political and activist positions available and necessary today, for the sake of the future. *The Pilgrimage* is both historical and impossible. Its synthetic re-enactment of the visits, of their memories, is also a very particular way to shape and re-seed an anti-fascist, collective future, that may in turn resist the erasure of its own past.

BOOTLEG HERITAGE

The first project invoked here, *OfficeUS*, operated as a humorous historical—and at moments, 'black'—mirror for contemporary architects, containing cautionary tales, but also importantly, twists against the cannon. Though it assembled and made visible the body of US work abroad, an archive that had not existed as such before this project, the full exhibition also produced contemporary architectural commentary on some aspects of that historical 'baggage'. The second project, *The Pilgrimage*, relied on diverse, unsanctioned as well as official sources to synthesise an experience. It processed indexical evidence of many actual visits to memorial sites, by many different individuals, producing thus an affective simulation and an amalgam of those visits. In its mode and political orientation, it responds to Tanja Petrović's important call for 'affective histories' of Yugoslavian socialism.[18] Both of these projects sidestep the authoritative survey exhibition model, experimenting with the definition of

16   Lesley Lokko's theme title for the 18th Architecture Biennale in Venice: *The Laboratory of the Future: Agents of Change.* https://www.labiennale.org/en/architecture/2023/introduction-lesley-lokko.

17   In two consecutive video triptychs we present interpolations of: 1) *Interrupted Flight* sculpture in the Memorial Park Šumarice, Kragujevac, Serbia, by Miodrag Živković 1963; 2) *The Battle of Sutjeska Memorial Monument* in the Valley of Heroes in Tjentište, Bosnia and Hercegovina which commemorates the fighters and soldiers fallen in a crucial World War II battle of Sutjeska, by Miodrag Živković i Ranko Radović, 1971; 3) *Stone Flower* commemorating the victims of the concentration camp in Jasenovac, Croatia, by Bogdan Bogdanović, 1966; 4) *Monument to the Revolution on Kozara* mountain, dedicated to the Partisan fighters, fallen soldiers and civilian victims of the Kozara Offensive in 1942, Bosnia and Herzegovina, by Dušan Džamonja with Marijana Hanzenković, 1972; 5) *Partisan Memorial Cemetery in Mostar*, Bosna and Herzegovina, by Bogdan Bogdanović, 1965; 6) *Monument to the Uprising of the People of Kordun and Banija* on Petrova Gora, Croatia, by Vojin Bakić and Zoran Bakić, 1981.

18   Tanja Petrović, "Towards an affective history of Yugoslavia," *Filozofija i društvo*, XXVII (3), January 2016.

the architectural archive, and pushing at its 'official', authoritative edges.

In its colloquial usage 'bootleg' refers to the illegal reproduction and dissemination of material. Indeed, by intervening in and transmitting their respective archives, the above two projects work against different kinds of authorities, while they both insist on maintaining the 'past as incomplete'. They produce vastly different modes of encounter with their 'archives', and thus also with the way their audiences glean and seed futures out of them. 'Bootleg archives' involved acts of anti-authoritative composition of the *OfficeUS* material in the first project, and the mining of a collective archive in *The Pilgrimage*, in both cases, against the grain of the contemporary, local understandings of their respective material's importance. Our hope was that they would both enable and provoke curiosity, 'rage, solidarity, resistance, dissatisfaction, doubt, and suspicion' and, perhaps 'arouse citizens' interest' in the topics they examine — their 'archives' and the histories and futures they may yet tell.[19] Most importantly, they have 'bootleg' forms of agency — unsanctioned and disseminated — within the various economies of heritage they inhabit and transform.

19   Ariella Azoulay, "Archive" *Political Concepts: a Critical Lexicon* 1, July 21, 2017; http://www.politicalconcepts.org/
       archive-ariella-azoulay/.

Biographies

ALEJANDRO CAMPOS URIBE

Alejandro Campos is a lecturer and researcher at the Dept. of Architecture, TU Delft, specialising in postwar Modern Architecture and the colonial dynamics of its universalising claims. Between 2021–2023, he worked as a Marie Sklodowska-Curie Individual Fellow at TU Delft and Research Associate at the Research Center for Material Culture (Netherlands), where he developed the EU-funded research project 'Multiculturalism in the work of Aldo and Hannie van Eyck'. In 2022, he organised the seminar 'From Multicultural to Pluriversal: Rethinking Universalist Notions in Modern Architecture' at Leiden Volkenkunde (Ethnographic Museum), and has co-organised the 2021 Jaap Bakema Study Centre annual conference, 'The Observers Observed: Architectural Uses of Ethnography'. In 2022, he was awarded the SAH Opler Membership Grant for Emerging Scholars, and participated in the summer school 'Learning to Unlearn Decolonially — Disobeying, Delinking and Relinking' by University College Utrecht.

ALGIMANTAS GRIGAS

Algimantas Grigas is an academic researcher at Kaunas University of Technology, a professional tour guide and practicing architect. Algimantas Grigas has a BA (2006–2010, Vilnius Tech, Faculty of Architecture) and MA (2013–2014, Glasgow School of Art, Mckintosh School of Architecture) in architecture. In 2010–2011 Algimantas Grigas moved to Belgium for the professional placement at Architecten De Vylder Vinck Taillieu (Gent, Belgium). Algimantas Grigas has been appointed as one of implementing architects to overlook the first personal exhibition of "Architecten de Vylder Vinck Taillieu" (opened at DeSingel, Antwerpen, between 2011 Sep 22 and 2012 Jan 8). In Lithuania Algimantas Grigas worked for a longest period at the office of "G.Janulytė-Bernotienė studio", with which won several architectural competitions and worked on the design of public buildings, specifically — academic buildings. Since 2010 Algimantas Grigas has been involved at the non-governmental organisation "Architektūros fondas" (Vilnius, Lithuania) that promotes architectural culture. He has been involved in developing the concept and practical framework of "Travelling Architectural Workshops" with children in the rural areas of Lithuania (2013–2015). Later in 2016 Algimantas Grigas co- curated the 17th series of talks of Architecture Fund titled "Architectural Practice in the Expanded Field" (2016 June 9, 15, 20, 30 and July 5). Algimantas co-founded and works since 2015 as a lead coordinator at the informal initiative "Ekskursas". Within it he maintains a professional tour guide career with emphasis on the interwar period Modernist architecture and Socialist Modernist architectural legacy in Lithuania. In 2020 Algimantas Grigas started a History of Arts postgraduate degree at Kaunas University of Technology, Institute of Architecture and Construction (supervisor

Dr. Vaidas Petrulis). The institute has been opened in 1956 and merged with KTU in 2010, but it still maintains certain autonomy and keeps the mission of scientific and experimental work in the field of architecture.

ANA MARTINA BAKIĆ

Ana Martina Bakić is an architect and assistant professor at the Faculty of Architecture at the University of Zagreb, where she heads the Drawing and Visual design section. She is a PhD candidate at the University of Zagreb, studying architectural exhibitions, the intersection of artistic and architectural practices, as well as the way in which these practices embody specific experimental or archival concerns and formats. She has designed a series of theater sets through a practice diaprojektor, which she shared with Ivana Knez. Bakić has worked on numerous exhibition designs with the curatorial collective WHW, including the Croatian pavilion for the Venice Art Biennale in 2011. She designed the exhibition of Sanja Iveković's work "Works of Heart," curated by Zdenka Badovinac and organized by WHW for Vienna Kunsthalle, on view from October 2022−March 2023, and is currently working on the same exhibition for the Museum of Contemporary Art in Zagreb, opening in June 2023.

ANA MILJAČKI

Ana Miljački is a critic, curator and Professor of Architecture at MIT, where she teaches history, theory and design, and directs the SMArch program. In 2018 Miljački launched the Critical Broadcasting Lab at MIT, engaged in critical curatorial and broadcasting work. She was one of three curators of the US Pavilion for the 14th Venice Biennale in 2014, with a project OfficeUS. Miljački is the author of The Optimum Imperative: Czech Architecture for the Socialist Lifestyle 1938–1968 (Routledge, 2017), coeditor of the OfficeUS series of books, guest editor of Praxis 14: True Stories , the editor of Terms of Appropriation: Modern and Architecture and Global Exchange with Amanda Reeser Lawrence (Routledge, 2018), as well as of The Under the Influence symposium proceedings (Actar, 2019). She recently coedited LOG 54: Coauthoring with Ann Lui, and an issue of JAE titled Pedagogies for a Broken World, with Igor Marjanović and Jay Cephas. Critical Broadcasting Lab's project The Pilgrimage | Pionirsko hodočašće is currently on view at Palazzo Mora in Venice until the end of November, 2023.

ANDREA GRITTI

Andrea Gritti is an Associate Professor in Architectural and Urban Design at the Politecnico di Milano. He studies the role of reusing and recycling in the theory and practice of architectural design. Among is publications are: Modulazioni. La concezione scalare in architettura (2018), Autostrada Novissima (2018) and Architecture at Work. Towns and Landscape of Industrial Heritage (2020).

ANDREEA ILIESCU

Andreea Iliescu is a multidisciplinary digital designer based in London. In her practice, she investigates the social, political and economic conflicts affecting disenfranchised communities, drawing inspiration from indigenous and other-than-human agents. Through this, her work converges interests in film, writing and alternative worldbuilding. Iliescu aims to spatially deconstruct the Western-centric perspectives of inhabiting the world by utilising the emancipatory potential of digital technologies, specifically focusing on video game engines as testing ground for the design of other worlds, institutions, forms of restitution and representation. Andreea Iliescu (b. Bucharest, 1995) is a MA Architecture graduate of the Royal College of Art in London. Her work was featured at the Ugly Duck in South London, under the exhibition titled 'WORLDING: Beyond Racial Capitalism', alongside fellow RCA students from Architectural Design Studio (ADS2) and at Istanbul Technical University with [speculative nematode] under the tutelage of Aslıhan Şenel. Iliescu contributed photography, CGI imagery and texts to Toronto-based publication of contemporary arts and culture, New Currency.

ANGELA ROUT

Angela Rout joined the faculty of Architecture and Built Environment (ABE) at TU Delft as an Assistant Professor and recipient of the distinguished Delft Technology Fellowship (DTF) for Top Female Academic Scientists. As a member of the Design, Data and Society group she investigates methods and implications for visualising emerging data resources for societal benefit, within the discipline of architecture. Previous to her post at TU Delft Angela was appointed as a Postdoctoral Research Fellow at the University of British Columbia, where she was team lead for a two year research collaboration exploring opportunities for sensor data to inform resilient and equitable community design. In 2020 she received her Ph.D. from the University Calgary in Computational Media Design, where she developed approaches for leveraging spatio-temporal data from smartphones to aid in master planning processes and design practice.

ANNA-MARIA MEISTER

Anna-Maria Meister is an architect and architectural historian. She is professor for architecture theory at KIT Karlsruhe Institute of Technology and co-director of the saai archive. Her work focuses on the interdependencies of processes of design and the design of processes, especially regarding their political, social, and aesthetic consequences. After receiving a PhD from Princeton University, a Master's degree from Columbia University, and a diploma from TUM, she was previously professor of architectural theory and science at TU Darmstadt. Her work has been internationally published and supported by the Graham Foundation, the Max Planck Institute for the History of Science, the Berlin Program and the DAAD, among others.

She is currently completing a book manuscript on paper architectures and bureaucratic formats in 20th century Germany and is co-author of Radical Pedagogy (MIT Press, 2022) as well as co-curator of the eponymous international research project.

AYMÉE THORNE CLARKE

Aymée studied architecture at the Bartlett School of Architecture, UCL, before completing a degree in History of Art and Masters in Architectural History, both at the University of London. She completed her postgraduate qualification in Archival Studies at the University of Dundee.

Throughout her studies, Aymée worked on site for several architectural projects in London, including the renovation of the Savoy Hotel and the construction of the British Museum WCEC, gaining 12 years experience in the architecture and construction industry. Experiences in practice and academia have reinforced her interests in the lineage of architectural drawing methods and typologies, the idea of authorship in the context of collaborative working environments, as well as the evolving role of the architect in the conception and construction of architecture.

In 2020 she presented a paper at the Society of Architectural Historians of Great Britian's annual symposium, 'Arch/tecture/Arch/ves', detailing how traditional archival practices and value attribution can alter and distort architectural histories. Aymee has been working as the archivist at RSHP / Rogers Stirk Harbour + Partners since 2017.

BURCU KÖKEN

Burcu Köken is an architect and a PhD candidate at TU Delft in the program "Architecture and Democracy" run jointly by the Nieuwe Instituut in Rotterdam. She was educated in Turkey and received her master's degree from the Middle East Technical University. Within the scope of her doctoral studies, she received the International Journal of Urban and Regional Research (IJURR) Foundation Studentship (2021), the Netherlands Institute in Turkey Travel Grant (2021), and the Istanbul Research Institute Travel Grant (2021). Currently, she is a Gerda Henkel PhD Fellow and teaching at the Academy of Architecture Amsterdam.

CATHERINE HOWE

Dr Catherine Howe is Research Officer at the Zaha Hadid Foundation, working across exhibitions, publications and research into the collection and related fields. Their specialism is in twentieth-century European and American art, architecture and design, particularly their interdisciplinary exchange with literature and philosophy. They have taught on undergraduate and postgraduate programmes at the Open University, the Courtauld Institute of Art and the University of Sussex, and worked as a *catalogue raisonné* consultant for the Roy Lichtenstein Foundation. In 2021 they received a postdoctoral fellowship from the Paul Mellon Centre for Studies in British Art to work on a book about the artist Francis Bacon and his French influences and reception through surrealism and post-structuralism. They have published in exhibition catalogues for Tate, Centre Pompidou, the Royal Academy and Barbican and have worked in curatorial and research positions for major group and retrospective exhibitions, including *Queer British Art 1861–1967* (2017, Tate Britain), *Isamu Noguchi* (2021, Barbican) and *Postwar Modern* (2022, Barbican).

CARLOS MÍNGUEZ CARRASCO

Carlos Mínguez Carrasco is an architect and curator based in Stockholm. He is Chief Curator at ArkDes – Swedish National Centre for Architecture and Design. Between 2012 and 2017 he was Associate Curator at Storefront for Art and Architecture in New York. He organized the 2016 Oslo Architecture Triennale with the After Belonging Agency, and was Assistant Curator of OfficeUS, the U.S. Pavilion at the 2014 Venice Biennale. At ArkDes, Mínguez oversees the program of exhibitions, collection displays, events and publications, and has organized the exhibitions Flying Panels: How the Concrete Panels Changed the World (2019), Kiruna Forever (2020), and Joar Nango's Girjegumpi – The Sámi Architecture Library (2023) at the Nordic Pavilion of the 18th Venice Architecture Biennale. His texts have been published in different magazines, catalogues and journals as Domus, Migrant, and Código and he is editor of various publications, including After Belonging: The Objects, Spaces, and Territories of the Ways We Stay in Transit (Lars Müller Publishers, 2016), OfficeUS Manual (Lars Müller Publishers, 2017) Bodybuildings: Performance and Architecture (Performa, 2019), Flying Panels (DOM Publishers, 2019), and Kiruna Forever (Arkitektur Förlag, 2020). He has taught at Columbia University GSAPP and lectured in several universities and cultural centers in Europe, Latin America, and the US.

CHRISTIAN BUCKHARD

Christian Burkhard studied Economics and Philosophy at the Vienna University of Economics and Business and the London School of Economics. He was a visiting professor at the Department of Building Economics at the University of Kassel, Faculty of Architecture, Landscape Architecture and Urban Planning in 2022 and has been a guest lecturer there since 2019. Since 2013, Christian has been collaborating with the architect Florian Köhl. In 2015 they co-founded Quest, a research and design outfit which focuses on architecture for urban communities. He is the editor-in-chief of Architectuul, a free and open text architecture archive and community which he founded in 2010. Architectuul is a member of LINA, a European architecture network, co-funded by the European Union.

DANA ARNOLD

Dana Arnold is Professor of Architecture at the Manchester School of Architecture. Her work focuses on histories and historiographies of architecture and urbanism in relation to social and cultural theory. Her publications make a substantial contribution to our understanding of London as a global city and as a visual phenomenon. These include a trilogy of monographs The Spaces of the Hospital: Spatiality and Urban Change in London 1680–1820, (2013), Rural Urbanism: London landscapes in the early nineteenth century (2006) and Re-presenting the Metropolis (2000 and pbk 2018), which offer theoretically informed, archivally based readings of the city. She has also considered London in comparative contexts with other cities, especially Paris and Tianjin and across the Middle East. This collaborative work explores how the built environment is experienced and used in the formulation of national and cultural identities and how these operate in a transcultural context. She was a Guest Professor, International Research Centre for Chinese Cultural Heritage Conservation, Faculty of Architecture, Tianjin University (2009–2019) and Honorary Professor, Architecture Faculty, Middle East Technical University, Ankara (2007–2015). Her most recent book Architecture and Ekphrasis: Space, Time and the Embodied Description of the Past (2020) examines the interaction between visual images and written histories of architecture. Using a broad evidence base of graphic representations of architecture, she argues that these images are a form of writing that have syntactical and linguistic qualities that tell alternative histories of seeing and experiencing space. She is completing an edited volume Re-Reading Women and Architectural History where prominent architectural historians, who happen to be women, reflect on their practice and the intervention this has made in the discipline. Her forthcoming book British Architecture: A very short introduction (in press) is a significant re-working of the subject offering new insights into the fluid relationship between architecture and culture.

DIRK VAN DEN HEUVEL

Dirk van den Heuvel is an Associate Professor with the Department of Architecture, TU Delft. Additionally, he is the head and co-founder of the Jaap Bakema Study Centre, the special research collaboration between TU Delft and the Nieuwe Instituut in Rotterdam. His expertise is in modern architecture, welfare state policies, housing and planning, and their related fields of cultural studies and discourse analysis with a special interest in archives and exhibitions. Van den Heuvel has been a visiting scholar at Monash University, Melbourne. He was awarded with a Richard Rogers Fellowship from Harvard GSD. He was the curator of the Dutch pavilion for the 14th architecture exhibition of the Venice Biennale in 2014.

Currently, he is in charge of the newly launched group Architecture Archives of the Future, which positions itself at the intersections of advanced architectural design and research, history and theory, archival studies and museology. The group aims to develop innovative methods of architectural knowledge production based on the new opportunities presented by digital technologies while building on Delft traditions of plan analysis and precedent research. Questions behind the research and education of the group are design-driven with the aim to contribute to the urgent societal questions of today, including the ones of climate change impact, and the socio-political ideas around democracy and diversity in open societies.

FATMA TANIŞ

Fatma Tanış is a researcher at TU Delft and the coordinator of the Jaap Bakema Study Centre, Nieuwe Instituut in Rotterdam. Previously, Tanış trained as an architect in Istanbul and Stuttgart and received master's degrees in Architectural History (ITU) and Conservation & Restoration of the Historic Built Environment (MSFAU). Having a particular interest in in-between realms, she has explored the specificity of port cities through the notion of cosmopolitanism in her doctoral project where she combined her personal interest in literary writing with her interdisciplinary background to explore İzmir from a cross-cultural perspective. Tanış earned a PhD degree from TU Delft with her dissertation entitled 'Urban Scenes of a Port City (2022)'. Her other publications include a themed issue 'Narratives #1 Eastern Mediterranean and Atlantic European Cities (2021)'; 'Spatial Stories of İzmir (2020)'; 'Space, Represention, and Practice in the Formation of İzmir during the Long Nineteenth Century (2020)' in Migrants and the Making the Urban-Maritime World: Agency and Mobility in Port Cities, c. 1570–1940, eds. Christina Reimann, Martin Öhman (New York, London: Routledge, 2020).

FEDERICO DEAMBROSIS

Federico Deambrosis, architect and PhD, is an Assistant professor in the History of Architecture at the Politecnico di Milano, where he teaches History of Contemporary Architecture. His research is mostly focused on the central decades of the 20th Century. On several occasions, he looked at transfer and boundaries, understood both as those separating a nation from another or as the thresholds between architecture and other realms (visual arts, structural engineering, leisure, planning etc.). Journals are recurring sources for his work. He is the PI of the project BiDiRIA (For a Digital Library of Italian Architectural Periodicals).

FRIDA ROSENBERG

Frida Rosenberg holds a PhD in architecture and is Curator of 20th Century Architecture at The Swedish Center for Architecture and Design, ArkDes in Stockholm. Previously she was a lecturer at the Architecture School, KTH Royal Institute of Technology teaching a Housing Studio and History/Theory courses. Her research consults historical trajectories of housing, urban design

and building development as a leverage in understanding current progression in architectural technologies and social conditions of the built environment. She also has a dedicated interest in cross-border relations between Sweden and the United States to frame a critical history of domestic architecture. Her essays have appeared in Domus, PLAN and Footprint and with book chapters in Tio byggnader som definerade 1960-talet/1980-talet/1940-talet and in Producing Non-Simultaneity: Construction Sites as Places of Progressiveness and Continuity. She is the co-editor of Perspecta 40:Monster and Arkitektur och Modernitet. Frida has worked in offices in Norway, US and Sweden on small scale residential projects as well as urban master planning projects. She holds a Bachelor of Science from University of Texas at Arlington, a Master of Architecture from Chalmers and a Master of Environmental Design from Yale University. Doctoral thesis: The Construction of Construction: The Wenner-Gren Center and the possibility of steel building in postwar Sweden.

GEORG VRACHLIOTIS

Georg Vrachliotis is the Full Professor and Head of the Design, Data, and Society Group at TU Delft's Faculty of Architecture. He also directs "The New Open", a project at TU Delft researching open data's impact on design and societal change. He obtained his Ph.D. from ETH Zürich and was the Dean of the Architecture Faculty at the Karlsruhe Institute of Technology (KIT) from 2016, while also serving as a professor of architectural theory. Georg has curated notable international architecture exhibitions such as "Fritz Haller: Architect and Researcher" in Basel (2014) and "Sleeping Beauty: Reinventing Frei Ottos Multihalle" at the Venice Biennale (2018). Furthermore, his curatorial prowess extended to "Models, Media and Methods: Frei Otto's Architectural Research" at Yale University (2020). An accomplished author, among his works is "The New Technological Condition. Architecture and Design in the Age of Cybernetics" (Birkhauser, 2020). Georg is an active member of the advisory boards for the Jaap Bakema Study Centre, ARCH+ magazine, and Schelling Architecture Foundation. Additionally, he serves as an external examiner at the Bartlett School of Architecture, UCL London.

GIZEM ÖZER ÖZGÜR

Gizem Özer Özgür is an İstanbul based architect, researcher, and educator holding a B. Arch. from IZTECH, Turkey, and JU, Sweden in 2012 with receiving honorary degrees, and MSc in Architectural Design Program at ITU, Turkey in 2015. She had been a visiPng research scholar at Ph.D. Program in Architecture + Design, Washington Alexandria Architecture Center (WAAC), Virginia in 2014 and at Center for InnovaPon in Engineering and Science EducaPon, Stevens InsPtute of Technology, NY, USA in 2019. She co-founded "Günlük Atölyeler Serisi (Daily Workshop Series)" an alternaPve educaPon channel and an open pla`orm for life-long, experienPal, and collaboraPve learning with the iniPaPve of the Chamber of Architects of Turkey. She has received several awards from both naPonal and internaPonal architectural

design, project and arPcle compePPons and was part of exhibiPons including İstanbul Design Biennial in 2016, and Contemporary İstanbul in 2018. Her research navigates around socio- cultural pracPces related to architectural history, theory, and design and deals mainly with mulPdisciplinary methods of criPcal pedagogy. Currently, she is a Ph.D. candidate in Architectural Design Program and has been working as a research and teaching assistant at the Department of Architecture at ITU since 2013.

HEIDI SVENNINGSEN

Dr. Heidi Svenningsen Kajita is an architectural researcher working for social change in everyday spaces. She uniquely combines architectural history, creative practice, and ethnographic strategies researching histories and possible futures of 20th century urban and architectural development. Heidi is currently assistant professor in the Section for Landscape Architecture and Planning at University of Copenhagen and visiting fellow at Newcastle University. She conducts archival- and fieldwork research into Northern European welfare states' extensive postwar housing and urban development. Her work challenges dominant histories of these built environments as "failure" by uncovering often unheard voices, and it reveals remarkable possibilities for people- and place-based planning and design processes. Her ongoing postdoctoral research project (Im)Possible Instructions: Inscribing Use-value in the Architectural Design Process deals with the archives of the large-scale redevelopment Byker Wall in Newcastle upon Tyne, UK. This project is funded by the Independent Research Fund Denmark (2019–23). Heidi is also part of Action Archive — a group of researchers and artists whose collaborative methods use formats of remembrance, such as witness seminars and exhibitions, that are also part of their research communication. Recent publications include: Kajita, H.S. et. al, Between Technologies of Power and Notions of Solidarity: A Response to Danish Ghetto Plan and Swedish Vulnerable Areas Documents. 2022. Kajita, H. S., 2022, "Urgent Minor Matters: Re-Activating Archival Documents for Social Housing Futures,"(E-pub ahead of print) In: Architecture and Culture; and, Kajita, H. S., 2023,"Gossip and Complaint: Expertly Ways of (Re-)Producing the Social in Housing"(Accepted/In press) In Contested Legacies: Critical Perspectives on Post-war Modern Housing. Migotto, A. & Tattara, M. (eds.). Leuven University Press.

IRINA DAVIDOVICI

PD Dr. Irina Davidovici is the Director of the gta Archives since 1 January 2022. She is a trained architect and historian, having obtained her doctorate in history and philosophy of architecture at the University of Cambridge in 2008 and her Habilitation at ETH Zürich in 2020. She led the gta Doctoral Programme in the History and Theory of Architecture from 2019 to 2021. Her doctoral thesis on German-Swiss architecture in the 1980s and 1990s received the RIBA President's Research Award for Outstanding Doctoral

Thesis in 2009. Her Habilitation thesis 'Collective Grounds: Housing Estates in the European City, 1865–1934', made possible by the SNF Marie Heim-Vögtlin Fellowship (2014–2016), focused on the urban integration of early housing estates in London, Paris, Amsterdam and Vienna. Her research straddles housing studies, the history of housing cooperatives, and Swiss architecture.

Davidovici has held positions as visiting professor at EPFL Lausanne (2020–2021), Harvard GSD Richard Rogers Fellow (2018), gta Postdoctoral Fellow (2016–2017), SNF Marie Heim-Vögtlin Fellow (2014–2016) at ETH Zürich, and senior lecturer at Kingston University, London (2008–2013). She is the author of Forms of Practice. German-Swiss Architecture 1980–2000 (2012, 2nd expanded edition 2018) and editor of Colquhounery. Alan Colquhoun from Bricolage to Myth (2015). Her articles were published in AA Files, The Journal of Architecture, OASE, ARCH+, Casabella, Joehlo and Project Journal. Her book The Autonomy of Theory: Ticino Architecture and Its Critical Reception (gta Publishers, Zürich) will be published in 2023, and Common Grounds: A Comparative History of Early Housing Estates in Europe (Triest Publishers, Zürich) in 2024.

IRIS RANZINGER

Photographer and specialist in image archives and digital collection management at the Architekturzentrum Wien (Az W). Studied art and photography at the Academy of Fine Arts Vienna and image science at Danube University Krems. She has worked on numerous projects on digital image archives, collection digitisation, collection databases and online publication, among others for the Generali Foundation, the Margherita Spiluttini Photo Archive, various self-designed artist work databases. In these contexts she also coordinated and edited exhibitions, books and websites. She taught image competence and image editing at the New Design University St. Pölten. For the Architekturzentrum Wien, she carried out a large-scale database harmonisation project in recent years, the content of which forms the core of the "Cold Storage" of the new permanent exhibition. Following this, her research focus is on new forms of data and collection visualisation.

ISABELLA MORETTI

Isabella Moretti is an architect, researcher, and editor based in Buenos Aires. She holds a Master's degree in Design Research from the Bauhaus Dessau Foundation, Humboldt University Berlin, and Anhalt University of Applied Sciences. Isabella has worked as a researcher at the Bauhaus Dessau Foundation and the Government of the City of Buenos Aires. She has also served as the editor-in-chief of Lots of Architecture publishers and NESS magazine. Currently, she holds the position of Director of the Architecture Archive and is a Professor at the School of Architecture and Urban Studies at Torcuato Di Tella University. Isabella is a founding member of the collectives FAN (Nervous Architectural Fantasies) and Cooperativa Espacial.

JULIAN BESEMS

I am a lecturer at the Bartlett School of Architecture, UCL and a PhD candidate at ETH Zürich. Throughout the past three years I have been teaching as a lecturer in the B-Pro MArch Urban Design programme at the Bartlett School of Architecture, UCL. In this role I primarily teach as a design tutor for RC11. Initially, I co-taught alongside Philippe Morel, and since this year, I have been leading the cluster on my own. Since September 2022 I have been conducting my PhD research at the Chair for Digital Architectonics with Ludger Hovestadt as my primary supervisor and Roberto Bottazzi (UCL) as my secondary supervisor. Prior to pursuing my PhD I worked as a junior architect at Balmond Studio. I hold a master's degree in architecture from UCL and a bachelor's degree from Newcastle University. In addition to my architecture studies, I completed a BSc in computer science with a minor in mathematics at the Radboud Universiteit Nijmegen. My research focusses on the domain of digital architecture and particularly at how computational literacy can change the way in which we think about architectural design. I approach these questions both from an abstract algebraic perspective in order to express the nature of the domains of architectural communication, and through a more applied approach relying on computational experiments to explore the integration of computational theory in architectural design methodologies.

JAVIER FERNÁNDEZ CONTRERAS

Javier Fernández Contreras (Dipl. Arch. ETSAM, 2006; Ph.D., 2013) is a Geneva-based architect, design theorist, and the dean of the Department of Space Design / Interior Architecture at HEAD – Genève. His work explores the relationship between architecture, representation, and media, with a specific focus on the role of interiors in the construction of contemporaneity. Contreras is the director of several BA, MA and research programs, including MAIA (Master of Arts in Interior Architecture) and Scènes de Nuit, a research platform investigationg the entanglements between night and architecture. He is the author of the books The Miralles Projection: Thinking and Representation in the Architecture of Enric Miralles (Applied Research and Design, 2020), Manifesto of Interiors: Thinking in the Expanded Media (HEAD – Publishing, 2021), and the co-editor of Scènes de Nuit: Night & Architecture (Ediciones Asimétricas, 2021), and Intimacy Exposed: Toilet, Bathroom, Restroom (Spector Books, 2023). His critical essays have been published in numerous books and specialised journals, including Marie-José Van Hee Architecten, Massilia Annuaire des Études Corbuséennes, Drawing MaHer, India Mahdavi, RA Revista de Arquitectura, RADDAR, and Plan Libre. Contreras is a regular contributor to professional debates, international juries and conferences. His work has earned him prizes in various international competitions, including the Concentrico Design Fes<val 2020, f'ar Lausanne 2019, and several editions of Europan. His recent projects and distinctions with HEAD – Genève include Train Zug Treno Tren, the opening exhibition at MUDAC Lausanne in 2022; the invitation to the 2021 Seoul Architecture

Biennale for the Circa Diem project (in collaboration with the EPFL); the Brands and Communication Red Dot Award 2020 and the Innovation Frame Award 2020 for the Space Duality project; as well as a Design Prize Switzerland 2019 nomination for the #Looslab project.

JANE PAVITT

Professor Jane Pavitt is Head of Research and Learning at the Zaha Hadid Foundation. She is a curator and historian of architecture and design, and a Visiting Professor at Kingston University (Kingston School of Art). From 2017–2021 she was Professor of Design and Architectural History at Kingston University, and from 2011–2017 she was Professor and Dean of Humanities at the Royal College of Art, where she also led the V&A/RCA History of Design Programme (Masters and PhD). Before that she was University of Brighton Principal Research Fellow in Design at the Victoria & Albert Museum, London, for 13 years. At the V&A, she curated a series of major exhibitions on 20th century and contemporary design including *Brand. New* (2000), *Brilliant: Lights & Lighting* (2004), *Cold War Modern: Design 1945–70* (2008, co-curated with David Crowley) and *Postmodernism: Style and Subversion 1970–1990* (2011, co-curated with Glenn Adamson). In 2017 she curated the exhibition *Superstructures: The New Architecture 1960–1990*, which was the first major study of High Tech architecture in the UK, at the Sainsbury Centre for Visual Arts, Norwich (co-curated with Abraham Thomas). She was co-editor/author of all the accompanying publications for the exhibitions. She is now the lead curator for a forthcoming major retrospective of Zaha Hadid, planned for 2025.

JOS BOYS

Dr. Jos Boys originally trained in architecture, and was a co-founder of Matrix feminist architecture and research collective in the 1980s as well as one of the authors of Making Space: Women and the Man-made Environment Pluto 1894 (republished by Verso, 2022). More recently she coordinated an open access archive about Matrix, as well as co-curating an exhibition at the Barbican Centre in London called "How We Live Now: Reimagining Spaces with Matrix Feminist Design Cooperative" (May 2021–2022).

Jos has been a journalist, researcher, consultant, educator and photographer; and has published several books. She is co-founder and co-director, with Zoe Partington, of The DisOrdinary Architecture Project which brings disabled artists into built environment education and practice to critically and creatively re-think access and inclusion. Her research and practice explores how everyday social, spatial and material practices come to frame what is 'ordinary' as a way of co-developing design interventions that challenge norms about who gets valued and who does not (in society, in the design of built space and in architecture as a discipline).

JOVANA TOŠIĆ

Jovana Tošić was born in 1988 in Belgrade, Serbia. She obtained her B.Arch (2007–2010) and M.Arch (2010–2012) at the University of Belgrade – Faculty of Architecture, where she defended her Ph.D. thesis in 2022, at the Department of History, theory, and aesthetics of architecture and visual arts and preservation of architectural heritage.

Her academic practice began at the University of Belgrade – Faculty of Architecture, where she worked as a teaching fellow (2014–2015) in history and theory of architecture subjects, and from 2016 until the present, she is working as a Professor of Vocational Studies at ITS – Information Technology School in Belgrade.

The main topics of her academic research refer to the preservation of architectural heritage from a contemporary and experimental position. Her scientific articles were cited in the book "People-Centred Methodologies for Heritage Conservation" (published by Routledge, 2021), Wikipedia's page (https://en.wikipedia.org/wiki/Scent_preservation), and other academic texts and scientific articles.

LUDO GROEN

Ludo Groen is a doctoral candidate in the history and theory of architecture at ETH Zürich, as part of the research project "Switzerland: A Technological Pastoral" led by Prof. Dr. Laurent Stalder and Prof. Milica Topalovic. His research bridges architectural and economic history by documenting the subterranean architecture of Swiss banks to store, transport, and trade gold between 1934 and 1971. His writings are published in OASE (2019), Strelka Mag (2020), Failed Architecture (2021), and most recently in the co-edited volume Automated Landscapes (2023). Ludo holds master degrees in architecture from Delft University of Technology and The Berlage. He previously worked as researcher at The Berlage and at the Nieuwe Instituut, where he co-curated the exhibition MVRDVHNI: The Living Archive of a Studio (2021).

LEO STUCKARDT

Leo Stuckardt (DE) is a practicing architect and researcher with a focus on emerging technologies, computational tools and speculative design. After receiving his architectural degree in Berlin and Delft he collaborated with various architecture firms before joining MVRDV in 2015. Here, he was predominantly involved in architecture and urban design projects in Europe, India and South-Asia before co-founding the in-house computational research & development unit MVRDV NEXT in 2017. Centered around the development and implementation of new technologies, Leo coordinates computational design support within MVRDV's projects as well as the development of

independent research projects. Leo has taught design studios at The Why Factory, TU Delft and workshops at IIT Chicago, Tsinghua University and Chiba University Tokyo amongst others. Within the research program of The New Normal at the Strelka Institute in Moscow, he developed atoll.city, a platform for urban design and governance based on deep learning.

LUKA SKANSI

Luka Skansi is an architectural historian and Associate Professor at the Politecnico di Milano. His research interests include in particular Italian architecture and engineering of the 20th Century, the architecture in Socialist Yugoslavia and Russian and Soviet architecture. Member of the curatorial board of the exhibitions Toward a Concrete Utopia. Architecture in Yugoslavia 1948–1980 (MoMA 2018) and Fiume Fantastika (Rijeka 2020–21), wrote on Carlo Scarpa, Aldo Rossi, Gino Valle, Pier Luigi Nervi, Myron Goldsmith, Jože Plečnik, Nikolaj Ladovskij, Moisei Ginzburg, Peter Behrens, Manfredo Tafuri and Vladimir Braco Mušič.

MARIA KYROU

Maria Kyrou is Architect Engineer (Dipl.-Ing., M.Arch.) with a focus on transdisciplinary research and the practices of knowledge. She is currently associated with the Project InKüLe of the Berlin University of the Arts. In the field of experimental media didactics, she explores how digital media are transforming established art disciplines, while creating new hybrid practices of teaching and learning. Presently, she develops experimental formats on 3D-Scanning and VR-Sketching, exploring their mutual possibilities for cocreation and collaboration across the physical - virtual spectrum.

Along with the conception and support of innovative teaching formats, part of her work to date has been networking and the formation of external collaborations, including projects with external partners, like the Cluster of Excellence, Matters of Activity (Humboldt University, Berlin).

Curious about design processes, she completed a graduate degree in architecture and a master's degree in computational design and transdisciplinary research (Aristotle University, Thessaloniki). After graduating, she collaborated with educational institutions such as the Goethe Institute (Athens) and HyperWerk Institute (Basel) in a number of international projects. Her work on hybrid learning spaces and phygital artefacts has been nominated for the 4A_Lab Fellowship (2019), presented in the New European Bauhaus (2021), in the Design Research in Humanities and Arts conference (Humboldt University, Berlin, 2021), the Athens Digital Arts Festival (2022) and the Cumulus Conference 'Connectivity and Creativity in times of Conflict' (Antwerp, 2023). The ideas of hybrid artefacts and fused learning communities continue to drive and inspire her.

MARIAM GEGIDZE

Mariam Gegidze (*1986) is one of the co-founders of the Tbilisi Architecture Archive – TAA. She is a PhD-student of the DFG Research Training Group 2227 "Identity and Heritage" since July 2021. In her research with the working title "Storytelling from the archives" she argues, that any object such as a record, a photograph, a building or a software, can play an important role in the memory making when it becomes a document. Her research interweaves the history of architecture with social movements and civic self-organisation, thereby focusing on her case study — the "Laguna Vere" — an aquatic sports complex in Tbilisi.

Mariam Gegidze was born in Tbilisi, Georgia and graduated from the architecture faculty of the Tbilisi State Academy of Arts. Since 2007 she lives in Berlin, where she studied cultural studies at Humboldt University of Berlin and worked as an assistant editor in the architecture Journals ARCH+ and BauNetz. She participated in the last two editions of Tbilisi Architecture Biennial; in the exhibitions Dialogic City – Berlin wird Berlin and Post-Oil City. She recently edited the publication "Laguna Vere".

MARK SAWYER

Mark's research focuses on the mediatisation of space and media practices in architecture. He received his PhD from the University of Western Australia, studying how ideas and practices from North America and Europe made their way into Australian architecture and were mediated through the image-type assemblages of post-modern architectural magazines. His research outputs include both traditional scholarly publications and creative works, including exhibitions.

MARTIEN DE VLETTER

For more than ten years Martien de Vletter worked at the Netherlands Architecture Institute (NAI) in Rotterdam. At March 1 2008 she started as Publisher at SUN Architecture in Amsterdam. At the NAI De Vletter worked as a Chief Curator for the last five years and in that position she was responsable for all the exhibitions, lectures, debates, educational programmes, publications and the curatorial team. De Vletter curated exhibitions alongside as well, like the monographic exhibition with and on UN Studio (2002), Asymptote (2003) or Le Corbusier (2007). Furthermore she curated thematic exhibitions such as the one on architecture and urban planning of the seventies in the Netherlands (2004), Architecture in the former Dutch East Indies (2007), the history of the State Architect (2006) and she was the curator of the Dutch Pavillion at the Venice Biennal of Architecture in 2006, with an exhibiton on the perspective in architectural drawings.

Martien de Vletter published books and articles on several topics like the monograph on the Dutch Modern Architect J.J.P. Oud (with Ed Taverne and

Cor Wagenaar), on the architecture of the seventies in the Netherlands and several books and articles on architecture in the Dutch East Indies.

In March 2008 Martien de Vletter started as the new publisher of architecture books at SUN Publishers in Amsterdam. SUN Publishers has been focusing on theoretical and practical books on architecture for a Dutch public. De Vletter continued this line, but also explored the international context for publishing, and transforming the architectural publishing line into an international publishing house. Besides running the publishing company, she has set up an international webshop for books on architecture (www.architecturebooks.eu).

In 2012 Martien de Vletter started as the Associate Director Collection at the Canadian Centre for Architecture. In this role she is responsable for acquisitions, donations, collection care, loans, access to the collection and supervision of the department. In 2014 she organized the ICAM conference in collaboration with Avery library and MoMA.

MARYIA RUSAK

Maryia Rusak is an ETH Postdoctoral Fellow (2022–2024) at the Chair of the History and Theory of Urban Design, gta, ETH Zürich, led by Prof. Dr. Tom Avermaete. Maryia's postdoctoral project investigates the Nordic architecture of foreign aid in postcolonial Africa, focusing on the pragmatic economic rationale behind architectural production. Before joining gta, Maryia completed her PhD at the Oslo School of Architecture and Design (2022) under the supervision of Prof. Mari Hvattum. Her doctoral dissertation examined the prolific building output of Moelven Brug—a Norwegian timber prefabrication company that, between 1955 and 1973, built schools, large housing developments and public buildings across the country. During her PhD, Rusak has been a research fellow at the Bauhaus Global Modernism Lab in Dessau (2020), where she co-curated an exhibition about the emergence of new environmentally-conscious building materials and co-taught AHO Master's studio course on new timber constructions (2021). In her research, Maryia is particularly interested in histories of everyday objects, webs of bureaucratic institutions, obscure intricacies of architectural production and, in general, how things are made. Rusak holds an M.Arch. in Sustainable Urban Planning and Design from KTH, Royal Institute of Technology in Stockholm, Sweden and a BA (magna cum laude) from Princeton University, USA. She has recently been a Visiting Fellow at the Architectural Theory Research Centre at the University of Queensland, Australia (2023).

MECHTHILD EBERT

Mechthild Ebert studied architecture at Bauhaus-Universität Weimar and Universidade Federal de Minas Gerais in Belo Horizonte, Brazil. Since 2020 she is a research associate at saai – Archive for Architecture and Engineering at KIT Karlsruhe, where she among other things co-curated the Exhibition

"Architecture for an Open Society". Before that she was responsible for the Archive Hans Hollein, Az W and MAK, Vienna. At the Architekturzentrum Wien she curated the exhibition Hans Hollein unpacked: The Haas-Haus'. Her research focuses on the genesis of architectural archives and which role they play in preserving certain narratives and hence can play in questioning those.

MEGHAN HO-TONG

Meghan Ho-Tong is an architect, and educator, based in South Africa operating at the interface of architectural practice and creative research. Her work uses artistic modes of thinking to investigate structures of dominion in the built environment, foregrounding femme perspectives with histories and spatialities of the Global South. She uses filmmaking as a research methodology, and has co-produced Chorus for MAXXI Museum''s exhibition Buone Nuove: Women in Architecture (2021), also screened at Arquiteturas Film Festival Porto (2022), ByDesign Festival Seattle (2023), and Monument, screened on Future Architecture Platform (2020). She is a research assistant and part-time lecturer at the University of Cape Town School of Architecture, Planning and Geomatics.

MELTEM YALÇIN UYSAL

I am Meltem Yalçın Uysal from Turkey. I graduated from the Izmir Institute of Technology in 2016 with a bachelor's degree in architecture. After that I got master degree from Politecnico di Milano departmant of Architecture and Urban Design. Since 2019, I have been working in Turkey as an architectural designer and project leader. I consider human nature and social sciences as inevitable design elements in all kinds of scales. The psychology of users at the architectural scale and the sociological implications of urban and regional planning play a major role in my design approaches.

MERIÇ ALTINTAŞ KAPTAN

Meriç Altıntaş Kaptan is a PhD candidate at Istanbul Technical University (ITU), Construction Sciences Program. Her major research interests include technological adaptation, refurbishment, and transformation of modern buildings and sites. Meriç is a graduate of Robert College (2010), received her B.Sc. in Architecture (2015) and her M.Sc. in Environmental Control and Building Technologies Program (2018) from ITU. Between 2018–2019, she has participated as a researcher in an Erasmus+ partnership project entitled "Re-use of Modernist Buildings (RMB)". Meriç is a WG3 member of the COST Action MCMH-EU project and is engaged in FOMA Forgotten Masterpieces project as a DOCOMOMO Germany fellow. Since 2018, she is working as a full-time research assistant in the Architecture Department at ITU, and is a member of DOCOMOMO-TR, Technology Committee. Currently, she is pursuing her studies at TU Delft as a guest PhD researcher.

MONIKA PLATZER

Head of collection and curator at the Architekturzentrum Wien (Az W). Studied art history and holds a doctorate from the University of Vienna. She has led national and international research and exhibition projects at leading institutions such as the Canadian Centre for Architecture (CCA) and the Getty Research Institute (GRI). Her exhibitions include: Hot Questions – _Cold Storage. The Permanent Exhibition at the Az W; Cold War and Architecture. The Competing Forces that Reshaped Austria; "Vienna. The Pearl of the Reich. Planning for Hitler"; Lessons from Bernard Rudofsky; Shaping the Great City. Modern Architecture in Central Europe 1890–1937; She has taught at the University of Vienna and the Technische Universität Wien; editor of ICAM print, the journal of the International Confederation of Architectural Museums (2004–2020). In 2014, she was visiting scholar at the Center for European Studies, Harvard University, USA. Her research focuses on transnational architectural history.

PATRICIO DEL REAL

Patricio del Real is an architectural historian who works on modern architecture and its transnational connections with a focus on the Americas. He explores the changing ideological maps and geographies of modernity, and the ways in which cultural and racial imaginaries have shaped the story of modern architecture. His courses—including, Making Buildings Beautiful, Architecture and Authoritarianism, Mestizo Nations: Modern Architecture in Mexico and Brazil, Architecture and Utopia in the 20th Century—explore modernism as a global phenomenon, taking on practices of design as these shape political and cultural power in our built environment.

His new book, Constructing Latin America: Architecture, Politics, and Race at the Museum of Modern Art, examines multiple architecture exhibitions and MoMA as a cultural weapon. It looks at its Department of Architecture and Design as it navigated the thorny politics of Pan Americanism and the cultural conflicts of the second postwar era. Del Real co-edited the anthology, Latin American Modern Architectures: Ambiguous Territories (Routledge, 2012).

Del Real is Exhibitions Review Editor for the Journal of the Society of Architectural Historians and futher investigates curatorial practices in architecture through seminars, workshops, and courses. Seeking new ways to collaborate, he developed Displaying Latin America and Architecture in the 'Museum'—with departments across Harvard and UNAM, Mexico and PUC, Chile—and in Curating Architecture Across the Americas, an ongoing program that brings together historians, scholars, and curators to define this nascent field.

Del Real holds a PhD in Architecture History and Theory from Columbia University and a Master of Architecture from Harvard's Graduate School of Design. Before coming to Harvard, he was Visiting Associate Research Scholar and Lecturer in the Program of Latin American Studies at Princeton University. Prior, he worked at MoMA's Architecture and Design Department on several collection and temporary exhibitions, and co-curated Latin America in Construction: Architecture 1955-1980, which received the 2017 Philip Johnson Exhibition Catalogue Award, recognizing excellence of architectural history scholarship in exhibition catalogues. He was the recipient of the 2015 Ann and Lee Tannenbaum Award for Excellence in Curatorial Practices, given by the Museum of Modern Art Board of Trustees.

PAULE PERRON

Paule Perron is architect and researcher. She is co-founder of the architectural collective minor, which seeks to question the impact of our practices on the "landscape of our constructed mistakes" (Haraway, 2016). Through the act of building, minor explores minor interventions and questions their capacity to profoundly transform the matrices of power lodged in our material environments. Paule develops a feminist practice between research and project, questioning the perpetuation of power relations, with a particular focus on gender discrimination. She recently curated the exhibition "Des corps dans la ville. Architectures, féminismes, et espaces construits" at the MAIDF, Paris, 2022. She is a member of the research platforms Domotopie (FNS n° 192831) HEAD - Geneva x EPFL, and Scènes de Nuit, HEAD - Geneva. Her work has been published and exhibited in institutions such as Plan Libre, Architecture d'Aujourd'hui and Villa Noailles.

PHILIP GOLDSWAIN

Philip is a senior lecturer in the School of Design at the University of Western Australia. Philip holds PhD in architectural history from the University of Melbourne (2020) and his research focusses on the relationship between the built environment and its visual representation.

SARAH HEARNE

Sarah Hearne is an architectural historian, educator, and curator. She received her Ph.D. in Architectural History at the University of California Los Angeles in 2020 with her dissertation "Other Things Visible on Paper: Architectural Writing and Imaging Craftsmanship 1960-87," which she is currently reshaping into A Getty Foundation Paper Project supported exhibition, Print Ready Drawings opening at the MAK Center for Art and Architecture in 2023. Her previous curatorial work includes an exhibition and symposium on information management and display in contemporary architectural research, titled Fieldwork (2015) at the University of Technology Gallery in Sydney. More recently, she was a co-curator on Schindler House: 100 Years in the Making (MAK Center for Art and Architecture, 2022),

Architecture Itself and Other Myths of Postmodernism (Canadian Centre for Architecture, 2018), and the 2017 Chicago Architecture Biennial with Johnston Marklee for which she co-edited the corresponding catalog, Make New History, published by Lars Müller. She is an Assistant Professor at the University of Colorado Denver, where she teaches history theory and Chairs the College of Architecture and Plannings inaugural Exhibition Committee.

SERGIO M. FIGUEIREDO

Sergio M. Figueiredo is an architect, author, curator and historian. He is an Assistant Professor of Architecture History and Theory at TU Eindhoven (TU/e), where he founded the Curatorial Research Collective (CRC), a fledgling curatorial and research group. At TU/e, he is also the chair of the AUDE Research Committee, the coordinator for the research seminars on architecture and urbanism, as well as the chair and head curator of CASA Vertigo, the exhibition program of the Department of the Built Environment. Outside the TU/e, he serves in the advisory board of the Flanders Architecture Institute (VAi) as well as the advisory peer group of the International Architecture Biennale Rotterdam (IABR). Figueiredo's work focuses on architectural institutions and exhibitions, particularly how they shape (and are shaped by) architectural culture, which he continues to develop through numerous contributions to publications and conferences, including guest editorships for the journals OASE and Architecture & Culture. His first book, The NAi Effect: Creating Architecture Culture, was published in 2016 by nai010 publishers.

SETAREH NOORANI

Setareh Noorani is an architect, researcher and curator at Nieuwe Instituut. Her current (curatorial) research at the Nieuwe Instituut (Rotterdam, NL) focuses on the qualitative, paradigm-shifting notions of decoloniality, feminisms, queer ecologies, non-institutional representations, and the implications of the collective, more-than-human body in architecture, its heritage and ambiguous future scenarios—for instance as part of the projects Collecting Otherwise, Appropriation as Collective Resistance, Feminist Design Strategies, and Modernisms Along the Indian Ocean. Setareh Noorani received for this work the Museum Talent Prize 2021, awarded by the Dutch Ministry of Culture and Science and, most recently, the Mondriaan Fund. Currently, she is involved in the selection committee of the yearly Nieuwe Instituut Call for Fellows, with 2023's co-curated theme titled Tool Shed. Recently, Noorani was part of the curatorial team of the London Design Biënnale 2023, and involved in the selection committee of the 2022 Tilting Axis Fellowship. Her work has been published on various outlets, such as nai010 publishers (ongoing series Documents and Histories), Footprint Journal, and Radical Housing Journal. Noorani holds a master's degree (MSc) in Architecture (TU Delft, cum laude).

SMARO KATSANGELOU

Born in 1999 in Thessaloniki, Smaro holds a Master's Degree in Architecture from AUTh as Class of '22 Valedictorian. She is currently completing her studies in the MSc. Program for Conservation of Cultural Monuments in AUTh and has been accepted to the PhD program for CreativeAI at Florida Atlantic University in the U.S (starting Fall 2023). Her research and professional interests focus on the intersection of culture and urbanity with digital media. She has participated in research projects regarding history of architecture, visual arts and urbanism in Thessaloniki and has designed numerous exhibitions and spaces across Greece.

UTA POTTGIESSER

Uta Pottgiesser studied architecture at the TU Berlin and completed her doctorate at the TU Dresden. She has been Professor of Heritage & Technology at TU Delft in the Netherlands since 2018 and Professor of Building Construction and Materials at TH OWL since 2004 where she is co-founder of the Institute for Design Strategies (IDS). As chair of the non-governmental organisation DOCOMOMO International and as a practising architect and researcher, she is concerned with the protection, reuse and optimisation of built heritage and the environment. DOCOMOMO International is represented by 79 national working groups worldwide and by several international specialist committees and is editing the peer-reviewed and Open Access DOCOMOMO Journal.

WIDO QUIST

Wido Quist (1977) is Associate Professor in Heritage & Technology and leading the section Heritage & Architecture at TU Delft (The Netherlands). He is Secretary General of Docomomo International, Chair of Docomomo Netherlands and was a board member of WTA NL-VL until 2023. Since 2022 he is—together with Uta Pottgiesser—editor in chief of the SCOPUS indexed Docomomo Journal. Recently published Docomomo Journals include #66 on Modern Plastic Heritage, #67 on Multiple Modernities in Ukraine and #68 on Middle-Classs Mass Housing. He has been active in many different national and international research and educational projects and has published extensively in the fields of construction history, adaptive reuse and modern heritage. His research and teaching centres around the preservation and adaptive re-use of the built legacy of the 20th century, connecting the specialist disciplines. Intertwining Values, Design and Technology, he is an expert on the crossing between historical knowledge of modern building materials and strategies for conservation and re-use.

XAVIER VAN ROOYEN

Xavier Van Rooyen graduated in architecture in the School of Architecture in Liège. He has practiced architecture since many years, as an assistant architect first, for JDS Julien de Smedt architects and Pierre Hebbelinck and then founding his o wn office wher e he developed several public commissions. He joined the Department of Architectural Design at ULiège as an assistant professor in 2012, where he developed his PhD with Jacques Lucan, author of Composition, non composition, and Bernard Kormoss.

His PhD project has a special research interest in the public realm and the theories of architecture in Western and non Western 1960's contexts. His research examines precedents design attitudes, methods and instruments with the explicit ambition to co nstruct a n historiography of the structure of indeterminate architecture since the 1960s. Xavier Van Rooyen is also assistant professor in UM ons (Belgium) where he teaches history and theory of architecture and is a guest researcher at TU Delft with a special focus on MVRDV digital archives.

YAĞIZ SÖYLEV

Yağız Söylev is an architect and researcher. He holds an MSc degree with honours in architecture from TU Delft. His expanded practice involves architectural design, visual research, curation and mapmaking. He is currently a researcher and teacher at the Department of Architecture at TU Delft and participates in several teaching and research activities in the section of Building Knowledge, including the *Campus Utopias* programme. Since 2021, he is co-responsible for the cartographic studies in the OverHolland journal. His research interests include informal learning environments and global networks of knowledge transfer from a decolonial perspective. Söylev was the associate curator of the Vardiya—The Shift Exhibition at the Pavilion of Turkey at the 16th Venice Architecture Biennale in 2018 and co-authored the TWTRATE project which was exhibited at the 2nd Istanbul Design Biennial. Moreover, his work has been showcased at various international exhibitions, such as The Shenzhen Bi-city Biennale of Urbanism\Architecture in 2019 and Dutch Design Week in 2023. He has practised as an architect at KAAN Architecten in Rotterdam and kpm – Kerem Piker Architecture Studio in Istanbul. In 2022, Söylev received the Building Talent grant from the Creative Industries Fund NL and collaborated with NEXT architects for a project called Schools with Future Value. He was a contributor of the winning proposal for the Europan 14: Neu Ulm competition.

22.11.2023
TU Delft
Berlage Zaal 1

10.30
Doors open

10.45
Welcome
Dick van Gameren, Dean of the Faculty
of Architecture and the Built Environment
(TU Delft) and Dirk van den Heuvel,
Head of the JBSC (NI, TU Delft)

11.00
Platforms
Moderated by Georg Vrachliotis (TU Delft)

Open Digital Architecture Archives
or the Infinite Metaphorical Iteration
of Architecture
Xavier Van Rooyen
(Université de Mons, TU Delft)

Progress Though Preservation:
The Value of an Active Archive
in Practice
Aymée Thorne Clarke
(Rogers Stirk Harbour + Partners)

Beyond Provenance:
Designing Building Archives
Erin Besler (Princeton University)
and Sarah Hearne
(University of Colorado, Denver)

Data, Memory, Manual:
Operationalising the Architectural
Archive as a Tool for Design
Leo Stuckardt (MVRDV)

Q&A

12.30
Lunch Break

13.30
Curatorial
Practices
Moderated by Yağız Söylev (TU Delft)

Curating Croatian Architectural
Archives: Curating Croatian
Architectural Futures
Ana Martina Bakić (Zagreb University)

Zaha Hadid Foundation:
Interdisciplinarity and Intersectionality
Jane Pavitt and Catherine Howe
(Zaha Hadid Foundation)

Archives without Walls:
A Reflection on Post-Custodial
Architecture Archives
Sergio M. Figueiredo
(TU Eindhoven,
Curatorial Research Collective)

Archived: The Western Museum
Archive as Open-World Game
Andreea Iliescu (Royal College of Art)

Q&A

15.00
Break

15.30
Archival
Constructions
Moderated by Fatma Tanış (NI, TU Delft)

Archives of the Ordinary:
On the Archive of Research
Maryia Rusak (ETH Zürich)

Immersed in a Virtual Harvest:
Formation of a Narrative-Driven,
Spatial Archive Based on 3D-Scanned
Architectural Assemblies
Maria Kyrou
(Universität der Künste Berlin)

From Collecting to Connecting
or How Not to Collect
Martien de Vletter (CCA)

Q&A

22.11.2023
TU Delft
Room K

10.30
Doors open

11.00
Social Media
Moderated by Angela Rout (TU Delft)

Mediated Archives: The Interiors of Instagram and TikTok
Javier Fernández Contreras and Paule Perron (HEAD – Genève (HES-SO))

Progressive Archiving: Strengthening Architectural Practice through Digital Integration and Integrative Approaches
Meltem Yalçın Uysal (Independent Scholar)

Continuity or Discontinuity of Architectural History: Digital Architectural Repositories and Social Media as Archives
Jovana Tošić (Information Technology School – ITS Belgrade)

createGalleries.py: An Abstract Formulation of an Art Gallery in Venice
Julian Besems (UCL, ETH Zürich)

Q&A

12.30
Lunch Break

13.30
Precarious Archives
Moderated by Wido Quist (TU Delft)

A Living Open Architecture Archive: Lessons from Docomomo and Architectuul Collaboration, Challenges and Potentials
Meriç Altıntaş Kaptan (Istanbul Technical University), Christian Burkhard (Architectuul, Universität Kassel), and Uta Pottgiesser (TU Delft, TH OWL)

Unsolicited Accounting of Centralised Planning Institutes' Project Documentation
Algimantas Grigas (Kaunas University of Technology, Institute of Architecture and Construction)

Unboxing the Martha Levisman Collection: A Case of Cultural Activism Arrives at the Di Tella Architecture Archive
Isabella Moretti (Torcuato Di Tella University, Torcuato Di Tella Architecture Archive / Cooperativa Espacial)

Unpacking Soviet Architecture Collections: Tbilisi Architecture Archive
Mariam Gegidze (Tblisi Architecture Archive)

Q&A

15.00
Break

15.30
Old Media
Moderated by Burcu Köken (TU Delft)

Click, Whirr, Jam: Architecture in and through the 35mm Photographic Slide
Philip Goldswain (University of Western Australia) and Mark Sawyer (University of Tasmania)

Revealing Archives via Dialogic Mapping: Explication of Discourses on Architectural Education in Mimarlık Journal
Gizem Özer Özgür (Istanbul Technical University)

Journals as Maps: Reconsidering BiDiRIA
Federico Deambrosis, Andrea Gritti, and Luka Skansi (Politecnico di Milano)

**23.11.2023
Nieuwe Instituut
Auditorium**

**10.30
Doors open**

**10.45
Introduction**
Aric Chen, General and Artistic Director
of the NI

**11.00
Metanarratives**
Moderated by Dirk van den Heuvel
(NI, TU Delft)

*The Powers of Metadata:
Stories of Archival Knowledge Constructions*
Mechthild Ebert (KIT/saai Karlsruhe)
and Anna-Maria Meister (KHI, Max Planck
Institute, KIT/saai Karlsruhe)

*'Az W Collection Online Meets
the Encyclopaedia of Architects':
Our Kickoff Project to Something Larger*
Monika Platzer and Iris Ranzinger
(Architekturzentrum Wien)

*Cherchez la Femme:
Finding the Feminised Line*
Dana Arnold
(Manchester School of Architecture)

Q&A

**12.30
Lunch Break**

**13.30
Decolonising**
Moderated by Setareh Noorani (NI)

*Indigenising the Archive: Girjegumpi
– The Sámi Architecture Library*
Carlos Mínguez Carrasco
and Frida Rosenberg (ArkDes)

*Reading Sino-African Archives:
Expanding Histories of the South*
Meghan Ho-Tong
(University of Cape Town)

*Futurising Latin America:
With the Anxiety of Presentism,
We Enter the Archive*
Patricio del Real (Harvard University)

Q&A

**15.00
Break**

**15.30
Archival Excess**
Moderated by Alejandro Campos Uribe
(TU Delft)

*Activating Social Housing Archives
(Meeting Minutes)*
Heidi Svenningsen Kajita
(University of Copenhagen)
and Jos Boys (Independent Scholar)

*In Search of Architecture
in Non-Architectural Archives:
Learning from the Archive
of the Swiss National Bank*
Ludo Groen (ETH Zürich)

*Museum-Archive in Polygyros,
Chalkidiki, Greece:
New Technologies, Exhibition Design,
and Archival Research*
Smaro Katsangelou
(Florida Atlantic University)

*Bootleg Archives:
Lessons from Exhibiting Unsanctioned
Architectural 'Heritage'*
Ana Miljački (MIT)

Q&A

**17.00
Concluding
Remarks**

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