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Framing a new discourse on petromodernity: the global petroleumscape and petroleum modernism*

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ABSTRACT

The concept of the Global Petroleumspace is an analytical tool which engages the roles which different oil actors play in the development of new urban ideas and built forms. Coined by Hein, this concept contributes to enriching our understanding of globalization, modernity, and architectural history and their impacts on space through time. Petroleum is modern industry's fuel par excellence. For much of the world, it is the arrival of petroleum on the local scene that introduces modernity with its attendant spaces, forms, materials, and discourses. To frame this new discourse on urban development and petromodernity, three events were organized: 'Petroleumscape Roundtable' held as part of the 17th IPHS Conference at TU Delft, 'Petroleum Modernism Symposium', organized at the Illinois Institute of Technology, and 'The Global Petroleumscape Conference' held at the Faculty of Architecture at TU Delft. This article briefly recounts and reflects upon the scholarly discussions which took place at these events, in order to outline an emergent discourse on petroleum's imbrication in architecture and planning.

KEYWORDS

Petro-culture; oil modernity; petroleumscape; Middle East

In *The Long Emergency* (2005), James Kunstler avers that industrial modernity was built on the back of oil -unrealistically cheap oil, to be precise- a foundation that renders the sustainability of modern prosperity doubtful.[1] The Western way of life, he contends, is gradually coming to an end, and the heralder of this demise shall be peak oil. As a proponent of New Urbanism, he deplores the effects of oil-reliance on American urban environments and thereby the American way of life. Suburbia is the bane of his existence-and the spur of his publications. Kunstler, has long advocated a return to what he considers to be traditional, humane, urban planning, but oil-dependence stands in its way.[2] But there is more to petromodernity than a narrative of crisis and impending doom to which Western urban protectionism and cultural anxiety is a reaction. While the body of knowledge on petroleum-related topics seems substantial, the available literature is dispersed, and it often focuses on isolated topics with narrow scopes. The scholarly insights from various, distinct disciplinary arenas are valuable but have yet to be integrated into a comprehensive panorama tying together local and global

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[1]See: Kunstler, *The Long Emergency*.

[2]Looby, "Chaos in the City."

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socio-political, economic, and cultural perspectives. This is especially relevant to the processes of urban development and transformation. This article highlights recent salient attempts to address this transdisciplinary lacuna. The coming together of many voices has given rise to a budding global discourse that constitutes a more methodical, nuanced, and scholarly approach to the climacteric topic of petromodernity than the stark vilification of petroleum emblemized in Kunstler's work.

The concept of the Global Petroleumscape, coined by Carola Hein, is an analytical tool which engages the roles which different oil actors play in the development of new urban ideas and built forms.[3] It advocates for the importance of the Global Petroleumscape in enriching our historical-geographical understanding of globalization, modernity, and architectural history. For much of the world, the arrival of petroleum on the local scene introduced modernity with its attendant spaces, forms, and discourses. This petroleum-driven modernism is also explored by Michelangelo Sabatino, Dean of IIT's College of Architecture and his students. Three events aimed to frame this new discourse on urban development and petromodernity. First, at Hein's initiative, 'The Petroleumscape Roundtable' held as part of the 17th Conference of the International Planning History Society at TU Delft (July 2016). Secondly, Sabatino, Saad AlGhamdi and Mohammed AlKhabbaz, organized a symposium on 'Petroleum Modernism', at the Illinois Institute of Technology (IIT) (October 2016.) Finally, Hein convened a conference on 'The Global Petroleumscape' at the Faculty of Architecture at TU Delft (May 2017). This article reflects briefly upon the scholarly discussions which took place at these events in order to outline an emergent discourse on petroleum's imbrication in architecture and planning.

These academic gatherings demonstrated just how global a subject petroleum is, bringing together researchers from across the world to share investigations and analyses of oil's impact on spaces, cities, and landscapes in disparate geographic locations. Notwithstanding their dispersion, these events collectively constitute a phenomenon that is both hegemonic and diffuse. 'The mansion of modern freedom', Dipesh Chakrabaty famously said, 'stands on an ever-expanding base of fossil fuel use.'[4] Accordingly, the endangered project of liberal modernity is predicated on dwindling hydrocarbons. The globetrotting made possible by the latter comes at both human and planetary costs.[5] Therefore, scholarship facilitates the scrutiny of infrastructural, material culture, and built environment of the petroleum industry.

Roundtable

The 2016 'Petroleumscape Roundtable' started with Hein's discussion of the oil industry's influence in shaping the world's built environment. Global supplies of oil, she explained, determine not only the appearance of roads and petrol stations, but also skyscrapers such as the Rockefeller Centre in New York, Petronas Towers in Kuala Lumpur, and Burj Khalifa in Dubai. She also claimed that inspirational architectural designs for new floating cities are directly linked to oil extraction in the Atlantic Ocean, before concluding that, just like skyscrapers and cities in extreme climates, these examples of technical achievements were catalysed by oil. Hein also illustrated some of her latest research on the Dutch Randstad, an area between Rotterdam, The Hague, Amsterdam, and Utrecht, where she examined the public responses to the oil industry in architecture, urban planning and design, art (namely, literature, film, and music).[6]

[3]See: Hein and Sedighi, "Iran's Global Petroleumscape," 350.
[4]Chakrabarty, "The Climate of History," 208.
[5]See: Barret, *Law of the Jungle*; and Barber, "Architectural History in the Anthropocene."
[6]For more information, see: Hein, "Oil Spaces," 887–929.

The roundtable presentations explored public and oil industry relations as well as urban design and petroleum-related facilities. There ensued an animated discussion in which Paul van der Laar mentioned that the spatial development of Rotterdam's port owes a great deal to the expansion of oil-related facilities such as storage tanks and refineries. The latter is a topic which needs to be explored by architectural historians and urban planning researchers. Pieter Uyttenhove and Paolo de Martino emphasized the unfolding role of oil-industry actors in the spatial development of port cities, including Antwerp and Naples. Lastly, Mohamad Sedighi briefly described an augmented reality tool that he and Hein have developed to illuminate the urbanization of Randstad. This tool elucidates the role of oil in shaping the built environment and the complex challenges of sustainable energy futures beyond oil.

With van der Laar's support, there followed a public presentation by Hein at the Museum of Rotterdam where she opened an exhibition named 'Oildam: Rotterdam the Oil Era 1862–2016', (running from 18 July 2016 to 5 January 2017). Curated by Hein and Sedighi, the exhibition maps and visualizes the extent of the city by oil and how the petroleum industry shapes the perception of Rotterdam's urban residents. Several workshops focused on the 'petroleumscape' fostered an overarching interdisciplinary analytical framework across the available scholarship on the production of petroleum and space development relations. The proceedings highlighted the need for global scholarly debate on the petroleumscape.

Symposium

The 'Petroleum Modernism' (13 October 2016) symposium addressed the architectural and urban manifestations of the petroleum-induced social and political economies, with a special focus on the so-called 'Gulf region'. Held at IIT, it featured speakers and respondents from Arizona State University, the University of Chicago, the University of Illinois at Chicago, the University of Michigan, TU Delft, and IIT.

Following Sabatino's introduction, Hein's keynote talk reviewed the petroleum industry's historical growth in European metropoles and their colonial outposts. 'Petroleumscapes', including the structures and images of Big Oil companies transformed social, political, economic, and urban conditions in Western Europe, and sometimes paralleled the later developments investigated during the symposium. The world's largest multinational corporations, whose activities changed the face of many European cities, significantly impacted subsequent global developments. Hein asserted that while oil has long been extracted and used by humans, the relatively recent industrialization of oil production has had major repercussions on the world's cities and politics. The drive to refine and administer crude oil produced architectural and urban conditions which reflected and reinforced its emboldened presence on the world stage. In addition to their impacts on space, these global 'architectures of black gold' are both represented and representationally-present in public media and politics.

While research on the intersection of oil, architecture, and urbanism builds on a generalized Western history and narrative, 'Petroleum Modernism' has a specific geographical focus: namely, the Gulf. This body of water, through which much of the world's oil passes, remained an unqualified proper noun in the discussions, documents, and even the symposium's subtitle, 'Architecture and Identity in the Gulf.' Neither Arabian nor Persian, the Gulf remained suspended in analytical space, a geopolitical referent emptied of nationalism. Though it was undoubtedly a diplomatic gesture, this tentative neutrality helped to bridge the Gulf in a manner that interpellates its history beyond the realm of geopolitical competition. The salient discourse of conflict around the Gulf

obfuscates the historical fact that it was effectively once a British sea, with vibrant Arab and Persian British protectorates proliferating along its coasts. We discussed both bousing developments in the Iranian city of Bushehr and in the Arabian cities on the opposite coast. Petroleum (and, more often than not, Empire) formed a unifying lens, rendering intraregional what would typically be considered trans-regionalist analysis.

Creating a common language to speak is as important as what is spoken. Since most of the contributors and many of the symposium participants spoke either Arabic or Persian (Farsi), much of the discussion revolved around interpreting and conveying the original meanings of many terms and phrases from those languages. Rather than accepting standard translations, Sabatino enjoined native speakers to share the original terms. In lieu of transmitting received, and often inadequate, translations, precise academic language can be developed through sustained interlingual engagement. Transliteration and translation can become integral components of research and scholarship through this radical move. However, in practice, the scholarship produced for and presented at the events and discussed therein was nearly all in English. This was despite the fact that the geographies in question were largely non-Anglophone. It highlighted how multilingualism could broaden the pool of textual and linguistic objects of analysis informing scholarship. British archives are extensive but on their own, to be blunt, they do not offer sufficiently precise knowledge about Britain's former colonial enterprise, nor the vast swaths of the earth to which it laid claim.

Scholarly language and its contested catalysation reflect the symposium's broader debate about the most appropriate overarching analytical framework for collective research. While the presentations were organized topically, grouping the most closely related disciplinary-methodological approaches together, a national-geographic structure could equally have applied. Yet such a framework would subserviate the infrastructures of modernity to the arguably arbitrary political boundaries which the subject itself transcends. Being the modern world's premier transnational commodity, oil extraction, refinement, and administration rarely occupy proximate geographies. Nevertheless, they are held together by elaborate global logistical networks. Considering methodological and topical fragmentation, Hein was the foremost proponent of adopting an interdisciplinary framework to tackle the variety of subjects spanning the spectrum of oil generated conditions.

This framework engages with petromodernity across multiple scales. It lends itself to the very scalar diversity that the contributors' approaches encompassed: from Saad AlGhamdi's and Sedighi's explorations of housing on opposite banks of the Gulf to AlKhabbaz's and Omar AlMahdy's examinations of the spatial infrastructures of transportation; from Gaddah AlGhamdi's foregrounding of respect in place of seclusion as an architectural manifestation of Islamic privacy, to Amjad AlKoud's holistic overview of the neotechnic transformation of Dubai from fishing village to global metropolis, to Mohammed Khesroh's explication of modernization's complicity in the 'death of a desert;' from Saud AlKhaled's appraisal of Kuwait's urban development guided by the liquid flows of oil and water to Bader AlBader's consideration of petroleum's facilitation of architectural production in Kuwait's state-building project. The spatio-physical manifestations of petroleum range from the architectural to the global. The socio-politics of oil are necessarily spatial and scalar, scale itself being socially-constructed, a notion the late geographer Neil Smith affirmed. That is to say, 'scale is produced in and through societal activity which in turn produces and is produced by geographical structures of social interaction; … [it] is the site of potentially intense political struggle.'[7]

[7]Smith, "Contours of a Spatialized Politics," 62.

Conference

At the 'Global Petroleumscape' conference convened by Hein, and held at TU Delft (17 and 19 May 2017), numerous themes and topics related to 'petroleumscape' were discussed. However, the main body of knowledge presented during the conference focused on how the oil industry and its by-products have shaped our built environments, and what post-oil scenarios may look like. While the former was extensive and comprehensive, the latter was only briefly explored. For instance, four different scholars investigated the oil city of Abadan. They primarily addressed the various local and international petroleum industry stakeholders roles in the urban development of the city. The post-oil scenarios assessed, albeit briefly, possible opportunities for transforming existing petroleum structures such as oil refineries. For instance, Peter Luscuere dedicated his keynote speech to circular economies beyond oil, a theme he discusses extensively in his book '*Circulariteit: Op Weg naar 2050?*'.[8] Luscuere argued that the petrochemical industry and greenhouse horticulture, both of which are largely dependent on fossil feedstock, constitute the DNA of the non-circular economy; and he suggested that the conversion of oil refineries into bio-refineries would provide the necessary feedstock to support the aforementioned industries.

Aside from these themes, a variety of topics such as petro-culture and oil-driven geopolitics in different geographical contexts were discussed. The keynote speaker Imre Szeman talked about the relationship between Energy Humanities and the North American Petroleumscape. He offered a survey of two broad landscapes: firstly, an overview of the (still developing) field of energy humanities, and secondly, the specific character of the contemporary North American petroleumscape. His presentation mainly addressed the need for the input of humanists in studies of energy demands.

Four in-depth presentations followed. Sabrina Peric argued that although twentieth-century Canadian petroleum experts were not a modernized homogenous group, they defined a path for governance in the Canadian North. Petra Dolata discussed arctic energyscapes, and Sofia Ahlberg of Uppsala University highlighted the relationship between feminine inscriptions and interruptions of petroleum flows in Egyptian and US fiction. Finally, Thomas Turnbull focused on the idea of reducing energy demand, and energy resource conservation, in California as an informational fix to a spatial problem.

The second day focused on oil landscapes. In the first keynote speech, Pamela Karimi addressed Iranian architectural culture in the early petroleum era. She discussed the spatial inequality in Iranian oil cities and argued that the British urban planning system became a model for other new towns (especially gated communities) built across Iran by both foreign experts and national architects and builders. Referring to the oil cities of Abadan, Masjed Soleiman, Aqa Jari, Haftkel, and Gachsaran, as the first modern and industrial towns in Iran and the Middle East, she claimed that the form and function of architecture, and urban planning, of these cities was of a semi-colonial character.

In the next keynote speech Rasmus Christian Elling focused on the politics of writing the petroleumscape. Elling argued that the cultural imaginaries of the petroleumscape are tightly connected to the experience of alienation and desalination that characterizes oil modernity. For instance, popular representations of Abadan, he argued, reflect a dialectic that connected to trajectories of petro-capitalism. Accordingly, these representations (nostalgia, narratives of community and place, identity constructions, idiosyncratic cults around certain artefacts) bring into view and obscure the forces

[8]In English: 'Circularity: On the way to 2050', a book which is available in: https://books.bk.tudelft.nl/index.php/press/catalog/book/isbn.9789463660549.

of this petro-capitalism. He also emphasized that alienation and desalination, in turn, reflect the destructive and creative forces of the automaton, the con-distancing and re-familiarization that removes or connects people to the vast systems that exploit them while unleashing tremendous energies.

Nelida Fuccaro's keynote defined Middle Eastern oil towns as 'Petro-Histories' and traced the industrial urbanism of Middle Eastern oil towns; their growth flourished in the midst of a generally inhospitable and rugged frontier, in the desert and mountainous regions of south western Iran, north western Iraq, eastern Saudi Arabia, Bahrain, Kuwait, and Libya. She claimed that this frontier was not unlike that which since 1900 had shaped much of Canada's industrial development around staple industries such as cod fishing and mining. She argued that the development of oil resources, the extension of central government, and the process of nation-building in the region were to varying degrees part of a larger narrative of British colonialism and of the neo-colonial and neo-imperial expansion ushered in by the advance of American power after the Second World War.

These introductory keynotes were followed by several short presentations. Sedighi discussed the major impact of oil-led geopolitics on the development of worker housing schemes in Tehran. Elmira Jafari focused on the role of media in establishing a relationship between the socio-spatial representation of oil and people's lifestyles in Tehran. And, Maryam Gorgpour analysed the development of Abadan to discuss the spatial strategies needed for planning liveable non-oil dependent cities.

The afternoon session began with Stephen Ramos's keynote speech which focused on oil-related urban infrastructure in the form of fixed circulatory infrastructure, including roads, ports, creek dredging, and airstrips. He claimed that the British were able to harness their influence with Gulf region rulers. Recommended British economic advisors helped rulers modernize their states by suggesting that they spend oil exploration stipends, and later oil revenue, on the kinds of infrastructural projects that British engineering companies in the region were offering. He concluded that infrastructures, beyond simply their primary use as 'metapragmatic' objects, are signs which are deployed in particular circulatory regimes to establish sets of effects. This was true, Ramos contended, for the British in their territorial pursuits throughout the Gulf, and for the states formed in the region once the British withdrawal.

That theoretical talk was followed by two distinct presentations; one by Laura Hindelang, who showed how natural, fluid, and precious materials like water and oil share a strongly interconnected and deeply ambivalent historical relationship, and the other by Sabatino, AlKhabbaz, and Saad AlGhamdi on how petroleum and petro-dollars established a modernist metropolis which diffused its own uniqueness throughout the Kingdom of Saudi Arabia via its architectural vocabulary.

Later Rosemary Wakeman gave a keynote speech on the Petroleumscapes of Central and Eastern Europe, Russia, and Africa and on how petroleum infrastructure investment shaped the geographies of urban and industrial development. This new narrative, Wakeman concluded, will tell us much about petroleum globalization and how peripheral places and borderlands transform under the impact of the search and extraction of fossil fuels. Benjamin Steininger and Alexander Klose of the Max Planck Institute for the History of Science presented Austrian examples and showed how the global petroleumscape is not only present in deserts, jungles, and oil sands, but also in regions that appear as the 'Other' of culture.

Subsequently, Matúš Mišík and Andrej Nosko discussed the challenges of gas supply in central and eastern Europe. Łukasz Stanek focused on how specific tools of socialist political economy, such as petrobarter, served as facilitators and constraints for the mobilities of architecture between socialist Eastern Europe, West Africa, and the Middle East during the Cold War. Irina Kukina assessed the impact of consumption of petroleum products on post-soviet city morphology.

Diogo Henriques mapped a series of oil spills along the West African coast which, he argued, changed Africans' environmental and social outlooks. The day concluded with the opening of Hein's Global Petroleumscape exhibition at TU Delft.

In the final keynote Paul van de Laar analysed the transformation of Rotterdam's port economy from the 1870s, and highlighted the role of the petroleum industry in this process. He used the concept of logistical revolution to explain why Rotterdam had lost its primacy as economic engine of the Netherlands. He argued that whilst distress characterized the city after World War II, it remained an important port thanks to the oil and petrochemical industries. He concluded that Rotterdam's port regime and spatial developments are path-dependent and still based on a transit narrative that emerged during the third logistical revolution.

The concluding presentations addressed Hein's proposal for using mapping as a tool to visualize the impact of the oil industry and its by-products on urban forms and the transformation of cities. Arnoud de Waaijer, Steffen Nijhuis and Michiel Pouderoijen stressed the importance of mapping for facilitating new studies on the built environment, and Johan Lagae of Ghent University, Merten Nefs of Delta Metropolis Association, Jaap-Evert Abrahamse and Menne Kosian of the Cultural Heritage Agency of the Netherlands, and Iskandar Pané of TU Delft presented examples of such studies. These studies, which will partly be published in an edited volume on the 'Global Petroleumscape', attested to cartography's potency as an analytical framework for studying ideas underlying the oil-based development of urban areas and their transformations over time.

Coda

As the aforementioned events show, the subject of petroleum and its spatial epiphenomena attracts significant scholarly attention. The interest it arouses is both discursive and projective, thus allowing it to be appropriated for the purposes of architectural and urban design. Consider, for example, the academic project of Neeraj Bhatia whose premise is that a modernity underpinned by the economies and infrastructures of oil demands a new urban morphology, the 'petropolis.'[9] Whether this is a positive or negative development is still the subject of debate between the utopians-cum-designers and the critics-cum-intellectuals. Nonetheless, the project embodies an informed provocation which catalyzes reflection and reaction. The gatherings recounted above displayed the vast amounts and diverse forms of knowledge amassed by participants. Save for a few members of public authorities and civic organizations, the majority of the participants were full-time academics. Therefore most of this knowledge has yet to be instrumentalized. Scholarship valorizes disinterested inquiry, but undeniably public engagement is now critical to the contemporary academy.[10] In contrast to scholars who tend to look back, designers are squarely forward-looking. If the former is to be inspired by the latter's public-spirited extroversion, perhaps they should ask not what they can do for the data, but what the data can do for them.

These events have attracted the attention of many scholars to a renewed discourse on petromodernity within the fields of architecture and planning. They have disseminated the concept of the 'petroleumscape'. At the 2018 IPHS conference in Yokohama, Japan, global researchers discussed this topic during two sessions. Indeed, the Global Petroleumscape may be understood as the meta-space opened up by petromodernity. It ties commodity and energy flows to diverse spaces and connects those spaces across national borders, urban forms, and architectural types to facilitate

[9]Bhatia and Casper, *The Petropolis of Tomorrow*.
[10]Oslender and Reiter, *Bridging Scholarship and Activism*.

cross-cultural and transnational analyses of architectural and urban histories in places with different constellations of petroleum production, consumption, administration, and representation. As a conceptual apparatus, it interrogates the role that petroleum has played and still is playing in shaping our environments. The built environments produced as instruments of petroleum modernism therefore constitute rich documents through which to understand a contentious phenomenon still at play in the world.

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No potential conflict of interest was reported by the authors.

Notes on contributors

Mohamad Sedighi graduated as an architect from TU Delft in 2009. Between 2010 and 2014, he worked as visiting lecturer at the Iran University of Science and Technology. Since 2014, he has been working on his PhD research, where he studies the relationships between modernity and the vernacular in Iran, through affordable housing development. In addition, he works as lecturer at the chair of Architecture and Dwelling, TU Delft. In 2017, he was awarded a MIT grant by GAHTC for his research proposal: 'The Architecture of Public Housing in the Cold War Middle East'.

Bader Albader is currently pursuing a doctorate in architecture at the University of Michigan. His research examines the spaces and institutions in which the magic of higher education takes place and the ways in which such institutions contribute to the growth of cities and states, particularly in the Middle East. The most recent exhibition and conference he has helped organize are 'Persistent Pasts: The Bicentennial Campus as Archive' and 'Networks of Power and Knowledge', respectively. He holds a Bachelor of Architecture from Pratt Institute and a Master of Arts in Architecture from Rice University.

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Bibliography

Barber, Daniel. "Architectural History in the Anthropocene." *The Journal of Architecture* 21, no. 8 (2016): 1165–1170.

Barrett, Paul. *Law of the Jungle: The $19 Billion Legal Battle Over Oil in the Rain Forest and the Lawyer Who'd Stop at Nothing to Win*. New York: Crown Publishers, 2014.

Bhatia, Neeraj, and Mary Casper, eds. *The Petropolis of Tomorrow* (Architecture at Rice # 47). Houston and New York: Actar, 2013.

Chakrabarty, Dipesh. "The Climate of History: Four Theses." *Critical Inquiry* 35, no. 2 (2009): 197–222.

Hein, Carola. "Oil Spaces: The Global Petroleumscape in the Rotterdam/The Hague Area." *Journal of Urban History* 44, no. 5 (2018): 887–929.

Hein, Carola, and Mohamad Sedighi. "Iran's Global Petroleumscape: The Role of Oil in Shaping Khuzestan and Tehran." *Architectural Theory Review* 21, no. 3 (2017): 349–374.

Kunstler, James Howard. *The Long Emergency: Surviving the Converging Catastrophes of the Twenty-First Century*. New York: Atlantic Monthly Press, 2005.

Looby, Robert. "Chaos in the City. Architecture, Modernism and Peak Oil Production – James Kunstler in Interview." *Three Monkeys Online*. January 1, 2005. Accessed August 1, 2018. https://www.threemonkeysonline.com/chaos-in-the-city-architecture-modernism-and-peak-oil-production-james-kunstler-in-interview/.

Oslender, Ulrich, and Bernd Reiter, eds. *Bridging Scholarship and Activism: Reflections from the Frontlines of Collaborative Research*. East Lansing: Michigan State University Press, 2015.

Smith, Neil. "Contours of a Spatialized Politics: Homeless Vehicles and the Production of Geographical Scale." *Social Text* 62 (1992): 54–81.