An Architecture of the Sea: Nationalizing the World's Maritime Commons--Then and Now

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Though May 12, 2019 marked the 10-year anniversary of the 2009 deadline for countries claiming sovereign territories along the ocean floor, many nations continue to file sovereign claims to extended seabed territories. In the largest land-grab since the colonial project, and in accordance with the provisions of article 76, paragraph 8 of the United Nations Convention on the Law of the Sea, eighty-five[1] sovereign territorial claims to the ocean floor have been made for the purposes of resource extraction and exploitation.

In an exhibition entitled "Nationalizing the World's Maritime Commons, Then and Now: May 12, 2019 | May 12, 2019," I produced an "Atlas of the Sea," which renders visible these new oceanic territories in an effort to establish the space of the sea as a site for design, and to shift the frame of urbanism and territorialization to the space of the sea. In this paper, I expand upon the ideas put forth in the exhibition by making an argument for an architecture of the sea. By underscoring the discipline of architecture's engagement with territory during the second half of the twentieth century, I argue that while a territorial approach to architecture is nothing new, it may serve as a precedent for developing an architecture of the sea. In particular, I argue that a territorial approach to— and an ethics of visibility for—designing the space of the sea is necessary in the face of a rapidly changing world order.

OCEAN SPACE

The myth and materiality of the sea—its darkness, depth, buoyancy—have historically rendered it extra-geographic, placing it outside the realm of representation. In our current era of ecologically and geopolitically induced migration and displacement, the oceanic imaginary takes on new urgency and valence, interrelating questions of temporality and citizenship with the making of global infrastructure. Yet even as oceans gain visibility and currency through their commercialization, legislation and politicization, their urbanity, spatiality, and histories of social oppression under mercantile, imperial, and colonial regimes continue to be represented as incidental phenomena—blank surfaces against which named, bounded and terrestrial bodies emerge. Despite the crucial logistical and ecological roles that oceans facilitate in supporting our globalized and industrialized ways of life, misconceptions about the ocean as an eternally bountiful, self-sustaining entity beyond ownership and sovereignty remain embedded in public consciousness, in addition to misconceptions about the sea as the "constitutive outside" to the terra-centric frame of architecture, urbanism, human culture, politics, or economies.

ARTICLE 76 OF THE UNITED NATIONS CONVENTION ON THE LAW OF THE SEA

The United Nations Convention on the Law of the Sea (UNCLOS) of 1982 is the international legal framework that administers the rights and duties of States to use the ocean and exploit its resources. The principal component of UNCLOS pertains to the definition and regulation of maritime zones that coastal States may be entitled to, including the territorial sea, the contiguous zone, archipelagic waters, exclusive economic zones, the continental shelf, the high seas, and the international seabed.

Previously, the rights of States to use and exploit oceanic resources was limited to a coastal state's Exclusive Economic Zone, defined as an area which extends from the coast to 200 nautical miles off the coast, and wherein a coastal state assumes jurisdiction over the exploration and exploitation of marine resources. Areas of the sea beyond this zone, including the continental shelf, have historically been vested in the Common Heritage of (Hu)Mankind, a principle that holds certain global commons in trust for humanity as a whole, protected from exploitation by individual States or corporations.

Article 76 of UNCLOS allows sovereign states to lay claim to bounded territories along the ocean floor on an extended continental shelf for the first time, for the purposes of resource extraction. This unprecedented demarcation of a space which has historically been vested in the Common Heritage of (Hu) Mankind represents an unprecedented territorialization and simultaneous urbanization of the sea. The geopolitical map of the oceans is literally being drawn anew, foreshadowing a new era in oceanic spatiality characterized by privatized, parceled, and exploited commodification.

To date, eight-five[2] individual claims to territories on the seafloor have been submitted by States for review. The total surface area of these claims equal 24.7 million square kilometers (9.54 million square miles) or roughly the surface area of the

Figure 9:

Elisa Kim, *Oceans, Inside-Out,* 2017.

Figure 1. Oceans, Inside-Out. Elisa Kim, 2017.

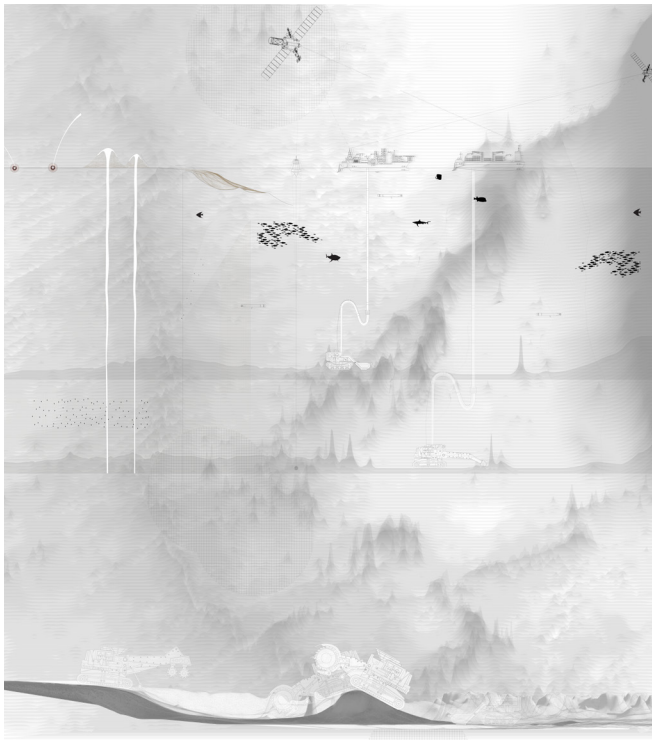

Figure 2. The maritime territorial claim of the The Republic of Namibia. Elisa Kim, 2018.

continent of North America—and approximately 4.8 percent of the Earth's total surface.

THE EMERGENCE OF A PLANETARY SCALE

While architecture might traditionally engage smaller scales such as those of the body, the house, or the neighborhood—it has also engaged with urban and regional scales, particularly during the 1950s with the emergence of the metropolis as a space extending beyond traditional city cores.

During the 1960s and 1970s mass media, digital technologies, and new modes of transportation including air and space travel enabled a new spatial experience and way of seeing the earth. Democratization of air travel and increasing speeds of global communications rapidly increased individual mobility and the "orbit" of individual movement. One might argue that the formation of a planetary scale began to take shape during this time—when on the one hand, the world seemed to "implode"[2] (echoed by the emergence of the notion of a global village), and on the other hand, the space of the individual experience "exploded."[3] Yet, this new planetary scale should not be understood simply as additive to previously established scales of social and spatial production (the city, the region, the nation), or simply as the "XXL" to Koolhaas and Mau's S, M, L, XL. Rather, like Lorenzetti's Allegory of Good and Bad Government (1339), which portrays a city and territory in unity, the emergence of a planetary scale achieves simultaneity with the smaller scales of nation, region, city, and even building. Geographers and urban theorists Neil Brenner and Christian Schmid describe that which for Koolhaas was "too endless to represent" as "planetary urbanism," in that "even spaces that lie well beyond the traditional city cores and suburban peripheries—from transoceanic shipping lanes, transcontinental highway and railroad networks, and worldwide communication infrastructures to alpine and coastal tourist enclaves, 'nature' parks, off shore financial centers, agro-industrial catchment zones and erstwhile 'natural' spaces such as the world's oceans, deserts, jungles, mountain ranges, tundra, and atmosphere—have become integral parts of the world wide urban fabric."[4] Brenner and Schmid echo that which in Urban Revolution in 1970, Henri Lefebvre posited as the complete urbanization of society as closely tied to processes of industrialization: "The industrial revolution initiated a long, sustained migration from the country into the cities that caused urban areas to spread,"[5] leading to a global or planetary urbanization and "obliterating distinctions between town and country through the production of integrated spaces across national territory, if not beyond."[6]

Thus, this paper utilizes Brenner and Schmid's description of planetary urbanization as a conceptual frame through which to understand the dissolution of the long-standing boundary between city and country and furthermore between terrestrial ground and global seabed territories. The resultant submarine claims under Article 76 further extend the reach of human (autonomous) activity on the planet through the use of sophisticated technology, pulling even spaces which may not be physically inhabited by humans into increasingly interconnected sources and sinks within an urbanized planet.

ARCHITECTURE'S HISTORIC ENGAGEMENT WITH TERRITORY

Despite the contemporaneity of discourse around urban hinterlands and operational landscapes, the idea of a territorial approach to architecture is not unprecedented. From Ildefons Cerdà i Sunyer's 1859 proposed extension of Barcelona, Eixample, to CIAM's 1933 Athens Charter, to Aldo Rossi's 1966 Architecture of the City, the idea of a territory extending beyond the traditional bounds of the city has oscillated between notions of a city beyond the bounded city, to territories against the city, to territories within the city, and back again. Cerdà's Eixample and Ebenezer Howard's 1902 Garden City are examples of conceptualizing a form of a city outside of an existing city. While Eixample envisaged an urbanized agglomeration of neighboring villages outside the walls of Barcelona's historic city core, Garden City conceived of a network of self-contained communities that would benefit from both rural (green) and urban (city) living environments—a concept that is evident in urban form even today. And whereas CIAM's Athens Charter privileged controlled social, technical, and hygienic urban structures in a turn away from the industrial city, Rossi's Architecture of the City recentered the idea of a city as a historical continuity, placing urban design back within the collective city.[7]

Thus, the notion of a territory in architecture was already emerging during the twentieth century as the expanded field of urbanism challenged the field of architecture to re-evaluate its methods and approach to scale, and stretching beyond bounded urban centers and centralized city forms.

TERRITORY OF THE SEA

While recent discourse in urbanization have started to shift the frame of urbanization from the bounded city to the larger operational or productive territories supporting it, this discourse (and culture at large) continues to privilege the terrestrial frame, neglecting the role of the space of the sea in planetary urbanization processes. If this perspective could be reversed, might we adopt a sea-centric approach rather than a terra-centric view of urban processes? If terrestrial bodies cover only twenty-nine percent of the Earth's surface, might we focus our attention on the remaining seventy-one percent? As cities grow and as urbanization becomes a planetary phenomenon, territories—including oceanic territories—become integral parts of the chain of urbanization. Thus, the land-sea binary within the problematic of the relationship of cities to their larger urbanizing territories must be reviewed.

THE (MARITIME) TERRITORIAL CASE OF THE REPUBLIC OF NAMIBIA

> "On 12 May, 2009, the Republic of Namibia submitted to the Commission on the Limits of the Continental Shelf, in accordance with Article 76, paragraph 8, of the United Nations Convention on the Law of the Sea, information on the limits of the continental shelf beyond 200 nautical miles from the baselines from which the breadth of the territorial sea is measured." - *from the Commission on the Limits of the Continental Shelf, updated 20-August, 2009*

The 50th claim to seabed territory made by the Republic of Namibia under Article 76 of UNCLOS was motivated by the emerging frontier of submarine diamonds off the Namibian coast. Namibia's diamond-mining sector accounts for 12.3 percent of its annual GDP. Though terrestrial diamond mines in Namibia are expected to be exhausted of their yields by 2050, gem-quality diamonds have been discovered along the sea floor off the Namibian coast. Most sea-floor diamonds located along the Namibian coast were formed further inland, and were swept out to sea over the course of 90 million year alluvial flows. These alluvial process yield far greater levels of diamond clarity than for those diamonds found in terrestrial mines, which places sea-floor diamonds among the world's most valuable gem stones. To the best of scientific and geologic knowledge, Namibia's sea-floor diamonds were pushed to the surface by Kimberlite pipes along the Orange River in inland southern Africa. These diamonds were gradually polished by sea currents over millions of years before achieving their unusual and highly valuable clarity and brilliance. In the year 2016, diamonds valued in the amount of $600 million were extracted off the Namibian coastal seabed through automated submarine vacuums. As Namibia's terrestrial diamond reserves diminish, sea-floor diamonds increasingly provide prospects for the nation's long-term economic stability.

SPATIALIZATION OF MARINE MINING SITES

Research activity in the Area during the twentieth century was directly pursued by cold war global arms and oil industries through technological development and data gathering, in addition to covert activities by state militaries, navies, and public and private intelligence agencies. The legacies of this research are evident in continued presence of firms such as Lockheed Martin and Shell Oil in the Area, in addition to state militaries. The amassed proprietary knowledge about, and access to, the Area were protected by "pioneer investor" activity agreements and clauses under UNCLOS. The mercantilist tendencies of the global contemporary pursuit of strategic resources have had a marked effect on the emergence of today's exploitation regimes.

Similarly, in the case of Namibian seabed diamond mining, a state and industry partnership between De Beers Corporation and the Namibian government enables the exploration of the Namibian submarine frontier and the collection of diamonds from its seabed. Formalized as the conglomerate Debmarine Namibia, De Beers Corporation and the government of the Republic of Namibia equally share revenues from this highly lucrative marine commodity. As terrestrial Namibian mining sites decline in their production and become derelict former sites of extraction, operational networks of surficial and submarine vessels begin to appear in Namibian waters. What is on land a conflict-laden diamond industry characterized by forced and exploited labor, becomes in the sea an automated, primarily non-human enterprise.

The area of the coast which supports Debmarine's marine operations is called is Sperrgebiet, translated to "the forbidden area." Over the years, political control over this area has changed hands three times, from Germany, to South Africa, and since 1990, to the Republic of Namibia. The Forbidden Area makes up about 3% of Namibia's total land mass, and is off limits to Namibia's entire citizenry as it functions as a base for Debmarine's fleet of five sea-going vessels which vacuum small quadrants of the sea bed about 20 kilometers from the coast. Further exploratory activities take place in the air-adjacent space of the sea, as drones fly over the Namibian territorial sea looking for promising operational seascapes. If found, a vessel called Mafuta--which combines technologies from oil rigs, dredging ships, and canneries, crawls slowly along the seafloor, dredging and vacuuming the terrain for gem quality diamonds.

While the Republic of Namibia is one of the first States to have active seafloor extraction operations (currently operating within its exclusive economic zone), these activites foreshadow the future of global submarine extractive and operational processes. In moving from the terrain of the land to terrain

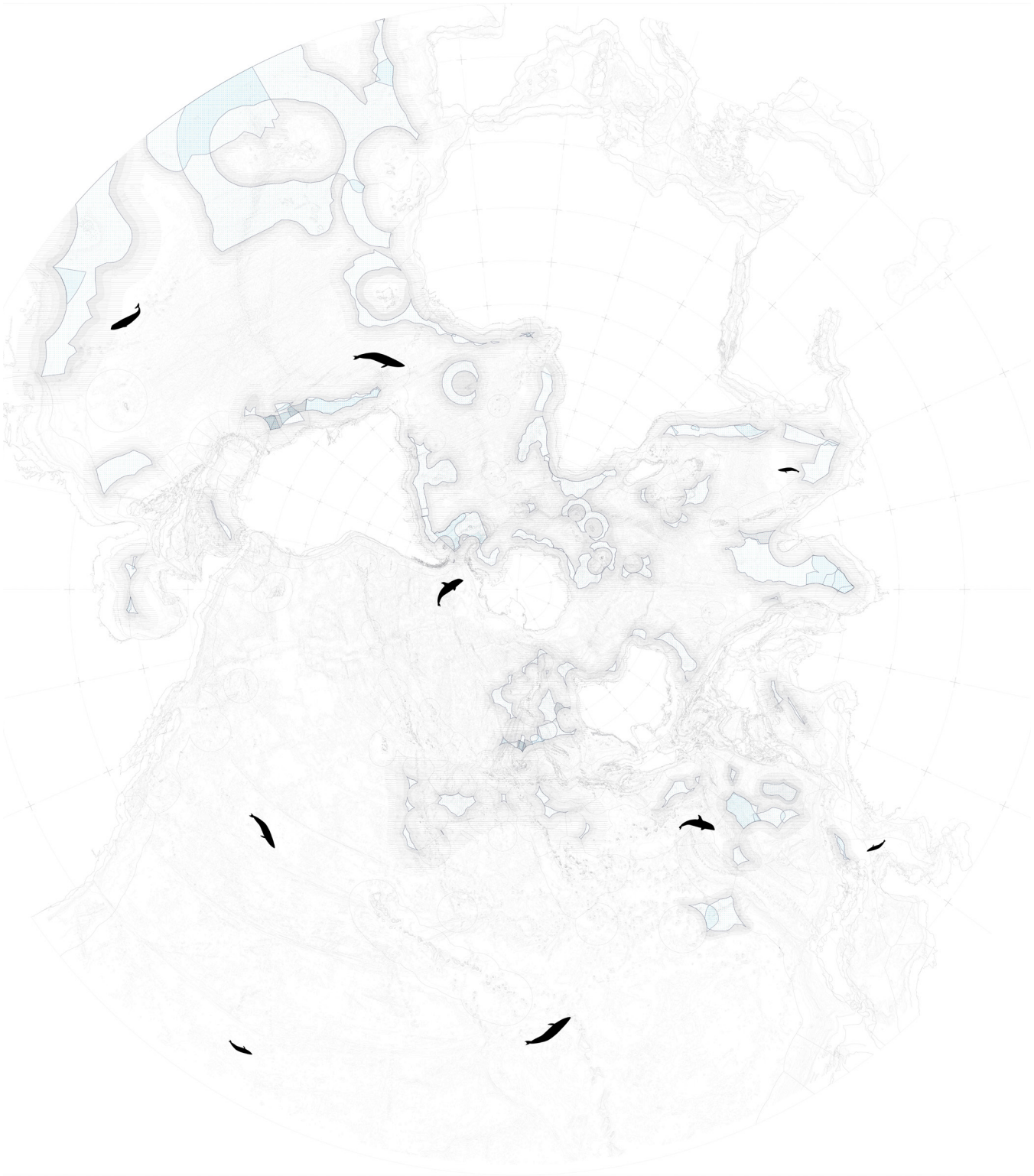

Figure 3. South Stereographic May 2019.

of the sea, planetary urbanization will become ever more oceanic, and the urgency to understand the spatial, urban, and ecological implications becomes ever greater. Furthermore, in shifting from terrestrial processes to seafloor processes, in what was once a shared coast and shared waters off Namibia, legislation, commodification, and urban transformations have undermined the social and vernacular use of this space. An approach to a territory of the sea seeks to understand the implications of these large shifts: from land to water, from human to non-human, from public to privatized.

AN ARCHITECTURE OF THE SEA

The claims filed under Article 76 including the maritime territorial case of the Republic of Namibia raise questions about the extent of architecture's hinterlands, and the ways productive landscapes figure into the architectural and urban imaginary. Article 76 enacts a corporate imaginary of the ocean as a space external to planetary urbanization processes and human culture, including the atrocities of the transatlantic slave trade and contemporary migrant deaths. This corporate imaginary must be complicated and necessitates a maritime ethics of visibility that re-centers territories of the sea through the act of drawing and other forms of visual representation. Architectural representation and projective methodologies in particular facilitate ways of seeing the deep seabed in spite of its physical inaccessibility. Thus, rather than seeing the sea as an externality outside the purview of land-based urbanization and spatial practices, an ethics of visibility should frame the events of the sea from the inside, looking out and invite its re-reading not merely as extra-geographic border zone, but as embodied grounds for urbanization and spatial transformation.

Furthermore, architectural representation's capacity for articulating yet uncharted or intangible landscapes may explicate the dissolution of the longstanding boundary between city and country by giving form to certain conceptualizations of nature and urbanity. With this dissolution of the urban and the hinterlands, modernity's culture-nature binary is complicated in light of a new geological epoch in which humans are playing an irrevocable role in shaping and transforming the world, nameyly, the Anthropocene.

Finally, an ethics of visibility challenges the denied status of the sea floor as part of the Common Heritage of (Hu)Mankind. Despite declarations of transparency, review processes for claims under Article 76 are clouded by layers of covert and inconsistent applications of normative scientific or governance procedures. The decision to fracture the space of the sea impacts all of humanity, yet knowledge of its occurrence has intentionally remained outside of public consciousness. While all claims submitted by States may technically be viewed through the UNCLOS website, security restrictions and rasterization of textual information prevents any straightforward understanding of the scope and magnitude of these claims. The labor involved in producing an "Atlas of the Sea" reflects this desired level of secrecy on the behalf of UNCLOS and its covert committee within the International Seabed Authority which has been charged with reviewing (approving and denying) all submitted claims. Thus, spatial representation of the claims under Article 76 may destabilize or challenge the mercantilist and imperialistic regimes of resource extraction and to begin to contribute to the possibility of a new oceanic imaginary.

CONCLUSION

By allowing States to make sovereign claims to territories of the deep seabed beyond national juristiction, Article 76 of UNCLOS catalyzes an unprecedented new oceanic spatial era characterized by privatized, parceled, and exploited commodification. Article 76 represents a poignant shift toward owndership, and away from steweardship, of the seas. The 85 new sets of oceanic state borders resulting from the invocation of Article 76 echo Philip Steinberg's characterization of the modern era as "a number of proclamations and events that are generally perceived as drawing lines designed to foster the enclosure, possession, and management of oceanic space."

Further, in an effort to facilitate resource extraction to support terrstrial ways of life, Article 76 extends the reach of human intervention and extractionary regimes to a planetary scale, (described by Brenner and Schmid as "planetary urbanism") beyond that of the terrestrial frame. Drawings of these new, uncharted--yet already contested--territories of the sea invite a re-reading of modernity's nature-culture divide, bringing into focus the space of the sea amid human autonomous intervention within the context of the Anthropocene, and opening space for new oceanic imaginaries.

ENDNOTES

1. At the time of preparation of this paper, January 15, 2020.
2. Neil Brenner, ed., *Implosions/Explosions: Towards a Study of Planetary Urbanization* (Berlin: Jovis, 2014).
3. Brenner, *Implosions/Explosions*.
4. Neil Brenner and Christian Schmid, "Planetary Urbanization," in *Urban Constellations*, ed. Matthew Gandy (Berlin: Jovis, 2011), 12.
5. Christian Schmid, "Theory," in *Switzerland: An Urban Portrait*, ed. R. Diener et al. (Basel: Birkhäuser, 2006), 164.
6. See Henri Lefebvre, *The Urban Revolution* (Minneapolis: University of Minnesota Press, 2003 [1970]).
7. Oswald Mathias Ungers, Rem Koolhaas, Robert Venturi and Denise Scott Brown, Colin Rowe, Cedric Price, and others further embraced various notions of territory that expanded or reached beyond the architectural canon during this time period.