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THE NORTH SEA: NEW PERSPECTIVES ON THE SEA-LAND CONTINUUM

Nancy Couling & Carola Hein

The North Sea region has been the nexus of northern European technological, cultural, and economic advancement. According to historian Michael Pye, “this cold, grey sea in an obscure time made the modern world possible.”⁽¹⁾ Together with its neighbouring coastal areas, the North Sea is also an exemplary case of intense interactions across the land-sea threshold. The “commons” of the North Sea has long been central to the region’s climatic and ecological balance, but also to its economies. After centuries of shared use, maritime and industrial processes have led to international border regulation, uninterrupted traffic along major transport corridors, intensified offshore capture and distribution of energy, and the erection of a multitude of structures. Related transfer sites have also created important nodes in coastal and hinterland areas. The sea itself has been so transformed that it has become an enigmatic urbanised space, charged with the task of increased economic production both from traditional and new maritime sectors while at the same time it has been emptied of imaginative narratives and cultural significance.

International laws and national institutions have divided the North Sea into seven parts based on national maritime borders attached to seven different countries, wholly consuming what was once a shared, fluid space. Each of the countries bordering the North Sea follows its own legal, planning, and policy approaches in order to manage extraction, green energy generation, and other areas of “blue growth” potential. Contemporary urgencies, such as flooding and other extreme weather events, ecological degradation, and predicted sea level rise, are increasing. These effects highlight the vulnerability of a continued industry-led sectorial approach to the North Sea and have drawn public attention to the unstable status of the sea itself. While collective policies and plans are needed, and EU Directive 2014/89/EU requires that all EU maritime areas must have strategic management plans in place before 31 March 2021, it is not clear whether such a transnational approach will be established at a time of dissolving European collaboration as signaled by Brexit.⁽²⁾ To meaningfully address the challenges raised by the urbanisation of the sea, to avoid further overexploitation and to ensure

foresight in management and stewardship, we need a comprehensive approach with collaboration among diverse stakeholders and disciplines. Such an approach could make the North Sea the epicentre of a paradigm shift of spatial considerations, from conceptualisation to design.

The urbanisation of the sea and its relation to land-based developments cannot meaningfully be studied or undertaken through the lens of a single discipline or from a single national perspective. It requires a long-term historical and large-scale understanding of the space we are studying. It requires different tools and new perspectives that help us bring together diverse sources and languages. To initiate conversations, the editors present voices from many disciplines and geographic positions. The book builds upon discussions that took place during the Marie Curie Fellowship held by Nancy Couling in the Chair History of Architecture and Urban Planning from 2017–2019 at Delft University of Technology and brings together selected contributions from the 2018 TU Delft conference “Viscous Space: The Offshore Physicality of the North Sea between Solid and Liquid.” This conference, convened by the editors, used thickness and resistance to flow as fundamental conceptual guidelines to link thematic sessions on representations, narratives and projections, infrastructure and heritage, and legal and theoretical constructions.⁽³⁾

The contents of the book are heterogeneous, combining artistic research, urban design projects in maritime contexts, and speculative proposals as well as academic papers, essays, contemporary and historic maps, photographs, and contemporary fiction. Presenting plural starting points offers potential for cross-fertilisation and opportunities to rethink cultural positions, spatial history, and practice. An excerpt from a novel offers a sense of ocean depth through an account of a physical descent into the deep ocean. The reader’s experience of the ocean’s interior differs from that of maritime planners who must weave conflicting economic and ecological threads together from above the surface. Policymakers are apt to view their task in the sea space as a battle against time. Researchers and designers report on the findings of specific studies, including artistic projects, where the investigation of sea sites has produced unexpected findings. This variety is intended to capture the richness and complexity of the topic, to facilitate different points of entry for readers who can then follow journeys from concepts through analysis to the design of possible futures. Together, these multiple perspectives present an illustrative overview of some of the ways that we can think of, think

with, and represent the sea as an urbanised space.

Our aim is to encourage understandings of shared land-sea spatial histories that go beyond the traditional exploration of development in the framework of nation-states or land-based entities. Employing a perspective *from the sea*, we aim to draw the sea-land continuum into discussions of urban and territorial development by investigating selected sites of critical interactions. These are sites that have been imagined, occupied, planned, and represented mostly by private actors, some of which have long operated autonomously, outside of classic land-based national and urban planning and policy frameworks that did not take the sea into account. Increasing in frequency and force, the effects of climate change have made the sea potentially more dangerous and unpredictable—conditions that neither directives nor technology are able to control. Our approach therefore promotes a three-dimensional understanding and calls for a trans-disciplinary investigation that is focused on space, society, and culture. The book argues that such an approach can help develop new directions in representation, design, and planning along the sea-land continuum and help dislodge inherited binary assumptions.

The geographic focus on the North Sea is not exclusive: we include perspectives from the Mediterranean, the Singapore Strait, the Pacific, the Barents, and the Baltic Seas. This allows us to gain a better understanding of what a paradigm shift from a land-based logic with fixed spatial and legal delineations to a more fluid, integrated, sea-based approach can mean for research, representation, and ultimately policy-making, planning, and design. In the next part of this introduction, we introduce two fundamental concepts to support our approach: the urbanisation of the sea and the port cityscape. We then offer a glimpse into the historiography of the North Sea, followed by a presentation of the issues at stake and the key analytical approaches. Finally, we provide a brief overview of the book.

URBANISATION OF THE SEA

AND THE PORT CITYSCAPE: THE CONCEPTS

Inspired by the influential work of Henri Lefebvre and his understanding of urbanisation as a multi-dimensional process including material structures and practices, regulations, and the modalities of everyday interactions, the theory of planetary urbanisation offers a comprehensive framework with which to conceptualise and critically

appraise processes unfolding around us.⁽⁴⁾ In particular, extended urbanisation draws attention to the logistical, infrastructural, and legislative systems that transform space outside of familiar urban environments, thereby restructuring vast areas, frequently causing social upheaval and environmental degradation. Such areas, including the world ocean and seas, serve vital functions for urban agglomerations, yet the direct links and interdependencies between them have mostly been neglected in the “city” focus of urban studies discussions.⁽⁵⁾ Today, what was previously considered rural or natural has been engulfed by networks, dedicated structures, and forms of labour that serve the requirements of what Lefebvre called a fully urbanised society, and the city must be differentiated from the processes of urbanisation extending far beyond it.⁽⁶⁾

In addition to material forms of its manifestation, urbanisation has many immaterial dimensions of social and cultural exchange that have been extensively researched by Manuel Castells and other scholars in the social sciences.⁽⁷⁾ This land-based, city-focused approach has led to research in urban studies that occasionally looks out to sea, but either focuses on abstract economic dimensions or logistic flows, or on select and limited spaces of network structures, for example, in relation to port cities.⁽⁸⁾ With the notable exception of Fernand Braudel, researchers have rarely explored people and infrastructure in the sea space—the foreland—or reflected on how they are directly linked to the hinterland.⁽⁹⁾ Land-side decision-makers, often working in capital cities away from the coast, exert a profound influence on the sea, shaping its spaces and practices often with land-based tools. Institutions and scholars studying the North Sea region also often have a land-centred bias and study ports, cities, and their regions through select lenses. The port cityscape—that is, the network of port-related spaces in a larger port city region—is a conceptual framework that aims to overcome these divisions through a focus on the sea-land continuum.⁽¹⁰⁾

Developing from these two perspectives, this book provides an analysis of the sea as an urbanised space of transformed nature in relation to resources and not in relation to existing urban nodes. It also analyses expanding urban development from port cities encroaching further into the sea. These two spheres of inquiry are dealt with unsystematically in current literature.⁽¹¹⁾ Addressing this absence, we set out to investigate how the urbanisation of the sea is reshaping our regional economic, social, cultural, and human environments at sea,

through the spaces of the coast and to the hinterland. In particular, we draw port city regions into the analysis of the sea-land continuum, providing a diversified context for a networked approach. We also aim to identify tools, methods, and frameworks that can help reconceptualise the sea space as an integral part of our historical urban realm and restore its *cultural* relevance, thereby testing the role that narratives and representations play in such a reconceptualisation. The urbanisation of the sea requires multiple perspectives and has yet to be specifically defined. This book opens up a range of possibilities and calls for further discussion, using the North Sea as a point of departure.

THE NORTH SEA: A BRIEF HISTORICAL INTRODUCTION

The North Sea—a complex topographic space characterized by a unique combination of natural and cultural features—provides the book’s central case study. It is a relatively shallow “shelf” sea, with a maximum depth of around 70–80 metres, and, in the southern half, there are large areas of only 40 m deep or less. Scientific evidence points to the southern part of the North Sea being a fertile plain during the mesolithic period from 12,000 BC to 6,000 BC, and settled by large numbers of people, until it was finally flooded around 8,000 BC.⁽¹²⁾

Cities around the North Sea developed through a rich legacy of trade and cultural exchange, where before the rise of the nation-state, dynamic inter-regional influences were readily absorbed into local culture. The similar warehouses of the Hanseatic cities of Hamburg, Amsterdam, and Bergen are one architectural example. Knowledge and cultural practices were connected across the water and, around the sixteenth century, literacy rates were higher on the coasts than inland.⁽¹³⁾ Michael Pye argues that in the formative period between 700 and 1700, people were constantly migrating around the North Sea and identities were not based on a notion as abstract as race.⁽¹⁴⁾ Anglo-Saxons originated from Germany and Denmark in the fifth century and the Vikings settled all around the region. The Shetland Islands were Nordic for 600 years.

During this period of continuous exchange and maritime activity, the North Sea began to be modified and “constructed.” Its sand has been extracted, it has been used as a dumping site, and, for hundreds of years, it has been dredged and trawled. In the mid-nineteenth century, highly developed areas on the North Sea’s southern shore, where port cities like Amsterdam, Antwerp, and London served as nodes on the

sea-land continuum, began attracting growing numbers of residents, industries, and technologies, particularly related to the transport and transformation of petroleum.⁽¹⁵⁾ The discovery of oil in the North Sea in the 1960s led to the growth of techno-logistical activities for oil and gas infrastructure in and around the sea. Today, the southern region of the North Sea boasts the highest population density in Europe. The densely populated areas, in conjunction with the existing maritime infrastructure, make it particularly attractive for development of the offshore wind energy sector.

The influence of the energy transition is evident in the offshore territories of wind parks, energy ports, empty sub-sea hydrocarbon formations, and left-over hydrocarbon infrastructure. This transition presents a challenge to planning and society as a whole, but also an opportunity to reimagine the on- and offshore energy landscape, which, as several contributions point out, will be no less “invasive” than the inherited landscape of fossil fuel—the petroleumscape.⁽¹⁶⁾ Currently around the North Sea, the transition to, for example, wind energy, is concentrated, large-scale, and state-led. Because it is developing in the tradition of the older oil-based energy landscape, it is characterised by dedicated zones, fixed infrastructure, and a continuous circulation of components, capital, and labour. Energy and communication infrastructure has been extended into the sea over the past 150 years, but we have failed to conceptualise this extension, instead allowing planning decisions to follow inherited notions of temporary structures and a visually open horizon.

The ongoing physical modification of the North Sea—like many seas—has been paradoxically accompanied by the upholding of inherited conceptual binaries: sea and land, urban and rural, nature and culture. Sea spaces have become sites of intensive activity for logistics, the extraction of food and energy, which also feed production processes downstream. Public access to the North Sea is limited and large areas are dedicated to security zones around industrial installations. As a result, these binaries have not only persisted but they have enabled a particular type of industry-led urbanisation to take hold within a space otherwise perceived as “natural.”⁽¹⁷⁾ These binaries have also, until recently, prevented the sea from being perceived as an urban realm. From a cultural perspective, northern European society has also withdrawn from the sea. In his photography and film essays, Alan Sekula has poignantly documented the “disappearance of the sea” brought about by container

shipping.⁽¹⁸⁾ Seafarers on the North Sea now lead a marginalised existence and contemporary maritime workers in other sectors are hired for their experience in steel, not the sea. Recent proposals, such as the creation of a giant dam across the North Sea, speak to a long-standing trust in technological solutions.⁽¹⁹⁾ The need to change human patterns and perceptions has become urgent.

CARTOGRAPHY, NARRATIVES, AND DESIGN

Investigating the sea as an urban realm resonates strongly with the current call to recalibrate inherited concepts of “nature” and “culture.”⁽²⁰⁾ It also challenges the notion of the “urban” as a discrete, bounded site.⁽²¹⁾ The sea is a critical protagonist and partner to urbanisation processes. It is paramount to the ecological well-being of the planet and to the emotional and economic well-being of the human population. Novel approaches that combine culture, imaginaries, and non-industrial narratives are needed to fully understand the North Sea and other oceans.

One language with which to tell this story is cartography. Cartography boasts a rich tradition on land and at sea, and is a useful way to communicate across disciplines, to identify gaps and common concerns, and, most importantly, to propose new perspectives. Cartographic representations help us see patterns and outliers, read critical territorial relationships, power structures, understandings, and belief systems, and derive meaning from huge, complex territories. But there can be no such thing as an objective map reproducing a pre-existing reality. Choices must always be made about what to represent and how, and what to exclude.⁽²²⁾ Mapping is therefore also an act of design: orienting, navigating, and in a state of becoming. Contributions to this volume show how cartography can capture both activity and desire and how it can narrate stories as well as delineate property and relate scientific facts.

Narratives are another way to rethink the North Sea. Author Tom Blass describes the North Sea as “too substantial, too terrible, to be glamorous,”⁽²³⁾ yet the sea’s magnetic pull, a sensation felt by many Europeans, has not diminished, rather it has perhaps intensified, but has been channelled into specialized views, sites, and events. The sea is thick with activity and desire. We tell ourselves stories about the sea that fuel human emotion. These stories include those that assert myths of unlimited space and resources, those that build new cultural relations to

the sea, for example, around oil, and those that question our place in the world and our aesthetic interpretation of it. In each case, narratives can exert a powerful force.

The book takes a spatial view and is particularly interested in the formulation of speculative design proposals rather than purely theoretical reflections. Both cartography and narratives, sometimes working together, are used as design tools to reimagine relations between land and sea, and to reassert the public dimension. Design enables new forms of access to areas that, through industrialisation and privatisation, have become illegible, invisible, or impenetrable—frequent characteristics of the offshore spaces of the North Sea, and other seas, as well as multiple coastal and hinterland sites. Artists and designers are able to break down physical and conceptual barriers, to reconstruct dialogues between separated fragments, and to explore the design potential of the sea's spaces, rhythms, materiality, and intangible qualities.

OVERVIEW

Our approach is reflected in the structure of the book. Consisting of four parts, it is organised to assist the reader in establishing a perspective from the sea to the land, to gain a sense of what is at stake in the space of the North Sea and in imagining future possibilities. The book progresses from preliminary methodological foundations in Part I to explorations of concepts of the sea in Part II. Extensions across the land/sea threshold are discussed in Part III, with a particular focus on the North Sea. Possible future orientations are presented in Part IV, "Cultivations," which offers examples of art and design projects that have traced new pathways of understanding and representation. An introduction to the individual chapters is provided at the beginning of each of these parts.

The visual orchestration of maps and photographs between these sections sets the atmosphere for the ensuing topics and creates a pause in the on-going narrative. These elements intend to present the central contradictions of the urbanisation of the sea: on the one hand, the scale of industrial processes can be vividly portrayed and, on the other, the aesthetic qualities of selected seascapes around the North Sea capture the imagination and instantly communicate a common sensual and cultural experience. Throughout the book, maps convey what is otherwise invisible to the public, and sometimes the maps convey a sense of what

has been lost. Historic North Sea maps present a different sea—more populated, displaying more diverse types of maritime knowledge—than the North Sea we observe today. The ocean and seas comprise a sophisticated planetary system that exerts a sense of wonder. The book includes discussions on how the use of the stars in traditional navigation methods linked the sea directly to the cosmos, thereby connecting mystery and spirituality to the practical task of sailing from place to place.⁽²⁴⁾ Quantitative evaluations of the economic potential of the sea should not replace awareness of the sea's intangible qualities and its connectedness to interscalar natural forces.

Several contributions argue that our current ecological crisis is accompanied by something potentially more acute: *a crisis of the imagination*.⁽²⁵⁾ Hence, as an interwoven collection of episodes, this book aims to retell the story of our relationship to the space of the sea. Together, the encounters in these chapters lead us to imagine a multi-dimensional urbanised sea; deep, thick, layered, viscous, emergent, partially anchored to port cities and partly connected to temporary sites of offshore development. This urban sea demands new governance systems and more complete forms of representation, adapted to planning with time, understanding grades of permanence and the dynamics of tides, currents, and seasons. But the urbanisation of the sea is not a laissez-faire option. While the congestion and degradation of the North Sea clearly emerges through many contributions, this book argues that to urbanise the sea must also mean practicing a form of *cultivation*: we must take care of commons, ecologies, and synergies for the long-term and acknowledge deep cultural and spiritual ties. This represents a paradigm shift in current practices and demands an urgent cross-disciplinary effort. Current marine planning is faced with a myriad of complex issues and dynamic parameters that defy land-based planning tools. Spatial and environmental reserves are reaching critical limits.

As a place that has absorbed, facilitated, and forged divergent histories, the sea also offers us a place for creative futures. Therefore, we focus on ways forward for designers regarding questions of the sea space and issue a call for greater involvement from the creative industries in collaboration with complimentary experts. The book aims to inspire such involvement and encourage further collaborations in this emerging field.

- (1) Michael Pye, *The Edge of the World : How the North Sea Made Us Who We Are* (London: Penguin Books, 2015).
- (2) European Parliament and the Council of the European Union, "Directive 2014/89/EU Establishing a Framework for Maritime Spatial Planning" (European Union, 23 July 2014), <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32014L0089&from=EN>.
- (3) The conference was held 20-22 June 2018. See the website for details: www.viscousspace.com
- (4) Neil Brenner and Christian Schmid, "Planetary Urbanization," in *Urban Constellations*, ed. Matthew Gandy (Berlin: Jovis, 2011). See also chapter six, this volume.
- (5) Hillary Angelo and David Wachsmuth, "Urbanizing Urban Political Ecology: A Critique of Methodological Cityism," *International Journal of Urban and Regional Research* 39, no. 1 (2015): 16–27, <https://doi.org/10.1111/1468-2427.12105>.
- (6) Henri Lefebvre, *The Urban Revolution* (Minneapolis: University of Minnesota Press, 2003).
- (7) Manuel Castells, *La question urbaine* (Paris: François Maspero, 1973).
- (8) Carola Hein, "Port Cities and Urban Waterfronts: How Localized Planning Ignores Water as a Connector," *WIREs Water* 3 (2016):419–38.
- (9) Fernand Braudel, *The Mediterranean and the Mediterranean World in the Age of Philip II*, vol. 1 (New York,: Harper, 1972).
- (10) Carola Hein, *Port Cities: Dynamic Landscapes and Global Networks* (London: Routledge, 2011).
- (11) Carola Hein, "The Port Cityscape: Spatial and Institutional Approaches to Port City Relationships," *PortusPlus* 8 (2019).
- (12) Laura Spinney, "Searching for Doggerland," *National Geographic Magazine*, December 2012.
- (13) Blass, *Naked Shore*.
- (14) Pye, *Edge of the World*.
- (15) Carola Hein, "Oil Spaces: The Global Petroleumscape in the Rotterdam/The Hague Area," *Journal of Urban History* 44, no. 5 (2018):887–929.
- (16) Hein, "Oil Spaces."
- (17) See chapter 7.
- (18) Allan Sekula and Noël Burch, *The Forgotten Space: A Film Essay Seeking to Understand the Contemporary Maritime World in Relation to the Symbolic Legacy of the Sea*, 2010, <http://www.theforgottenspace.net/static/notes.html>.
- (19) Jon Henley and Alan Evans, "Giant Dams Enclosing North Sea Could Protect Millions from Rising Waters," *The Guardian* (12 February 2020), <https://www.theguardian.com/environment/2020/feb/12/giant-dams-could-protect-millions-from-rising-north-sea>.
- (20) Timothy Morton, *Ecology without Nature : Rethinking Environmental Aesthetics* (Cambridge, MA: Harvard University Press, 2009).
- (21) Neil Brenner and Christian Schmid, "The 'Urban Age' in Question," *International Journal of Urban and Regional Research* 38, no. 3 (May 2014): 731–55, <https://doi.org/10.1111/1468-2427.12115>.
- (22) Geoff King, *Mapping Reality: Exploration of Cultural Cartographies* (Basingstoke: Macmillan Press, 1996); Mark Monmonier, *How to Lie with Maps*, third ed. (University of Chicago Press, 2018), <https://www.press.uchicago.edu/ucp/books/book/chicago/H/bo27400568.html>.
- (23) Tom Blass, *The Naked Shore: Of the North Sea* (London: Bloomsbury, 2015).
- (24) See chapters 5 & 8, this volume
- (25) See chapters 14, 17, 20, this volume