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The Maritime Mindset

A Conceptual and Practical Exploration of Mapping Port Cities

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PRACTICES

The Maritime Mindset: A Conceptual and Practical Exploration of Mapping Port Cities

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ABSTRACT

Centuries of trade have left their traces in the culture and society of port cities. This paper explores the usefulness of the concept “maritime mindset” to recognize these traces, and analyses it from different disciplinary perspectives. In the second part, it proposes the practice of “deep mapping” as a methodology of identifying and documenting expressions of maritime culture and trade in public space. In conclusion, it addresses some questions that are crucial when addressing a maritime mindset, such as whether it is a top-down or bottom-up mindset, which spatial scale it entails, and whose values and interests the mindset represents. Ultimately, we argue that (deep) mapping can play a role in producing a more layered spatial, social and cultural understanding of the complex nature of port cities.

KEYWORDS

Mapping; Port Cities; Culture; Identity; Maritime Mindset

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The Maritime Mindset: A Conceptual and Practical Exploration of Mapping Port Cities

Due to their position on the edge of water and land, port cities face unique challenges that require constant innovation. At present, these challenges include sea level rise, international legislative demands to radically lower CO₂ emissions, and social tensions stemming from 'superdiverse' demographics.¹ It no longer suffices to see a port city merely as an economic engine that can be adjusted through technological innovations. We argue that in order to tackle multifaceted challenges and arrive at sustainable solutions, economic and technological knowledge needs to be accompanied by a deep understanding of relationships between space, society and culture.

The Leiden-Delft-Erasmus University consortium's PortCityFutures Centre (www.portcityfutures.nl) is well equipped to gain such an understanding, as it consists of anthropologists from Leiden University, designers, architectural and urban historians from Delft University of Technology, and economists and historians from Erasmus University Rotterdam. Together, they analyze relationships between space, society and culture within port city territories, from different viewpoints and multiple disciplines. This multidisciplinary offers its own challenges, however, as scholars of diverse disciplinary backgrounds use different concepts and methods. Moreover, the center aims to reach out to practitioners, which even further complicates communication. It is therefore crucial to be precise about words, concepts and meanings. Affiliated researcher Beatrice Moretti, for example, emphasizes the need for a glossary or dictionary of words defining and relating to port cities. "Much like when talking of love," she argues, "discussing the port city relationship requires careful understanding of what words actually mean. The continuous dialogue between water and land and the dynamic landscape between port and cities entwined in global networks necessitates a careful understanding of changing terms of port and urban infrastructures and functions."²

Not only are words important in the relationships between port and city and between researchers and practitioners; words and language also influence and shape the environment - and vice versa. The PortCityFutures subgroup Mapping Maritime Mindsets, which consists of PhD and post-doctoral researchers from the disciplines of design, history and geography, has been addressing how various economic, social and cultural relations within port cities leave their mark on spatial structures and the urban fabric. Since these structures are of human manufacture and, in

1 Peter Scholten, Maurice Crul, and Paul van de Laar, eds., *Coming to Terms with Superdiversity: The Case of Rotterdam* (Cham: Springer, 2019), <https://doi.org/10.1007/978-3-319-96041-8>.

2 Beatrice Moretti, "Port City Discourse: A New Vocabulary for Research and Action," *portcityfutures*, March 31, 2021, <https://www.portcityfutures.nl/news/port-city-discourse-a-new-vocabulary-for-research-and-action>.

turn, influence life within the port city, this research group uses the term “maritime mindset”. This concept encompasses a specific mentality or culture and a key element in what Carola Hein views as characteristics for that which enables port cities to be resilient.³ This conceptualization, however, demands a definition that is multidisciplinary and suitable for both academics and practitioners. Evaluating the concept’s usefulness requires answering several basic questions: What is a maritime mindset? To what extent and in what ways are port cities characterized by a maritime mindset? Have port cities, throughout their history of transnational connections and industrial developments, generated a particular stance and mentality in inhabitants and governing entities that have shaped their urban fabric?

In this article, we aim to clarify the meaning of the maritime mindset by using the written equivalent of a roundtable discussion. To come to a more nuanced understanding that further develops the concept for port city-related research and decision-making processes, we each reflect on the concept from our own research perspective. In the second part, we introduce the practice of mapping as one way of integrating social, cultural and spatial tools for multifaceted port city questions. We can only imagine, design, plan and assess the future of port cities by taking stock of their complex maritime urban histories, and mapping is one way of doing so.⁴

1. Defining the Maritime Mindset

For **Carola Hein**, port cities are a particular type of city. Located at the edge of sea and land, they have long been nodes in global flows of goods. Their spaces, institutions, and tacit knowledge have developed often over centuries to facilitate shipping. Diverse public and private stakeholders of all classes have often come together to facilitate shipping and maritime practices. The combination of maritime and urban interests can lead to creative planning for resilience, particularly when port and city authorities pursue the same strategies. Conversely, social unrest, strikes, and other social actions often disrupted shipping practices and led to social adjustments. Awareness of ships, shipping and water was long part of individual and collective imaginaries among larger parts of the population. The concept of the maritime mindset and the values that adhere to it are embedded in the actions of institutions and other local actors - including citizens - and are inscribed in spatial patterns, sometimes over centuries.

3 Carola Hein, “Port City Resilience: (Re-)Connecting Spaces, Institutions and Culture,” portcityfutures, March 17, 2020, <https://www.portcityfutures.nl/news/port-city-resilience-re-connecting-spaces-institutions-and-culture>.

4 Vincent Baptist, “Deep Maps and Time Machines: Exciting Times for Collaborative Research on Port Cities,” portcityfutures, November 24, 2020, <https://www.portcityfutures.nl/news/deep-maps-and-time-machines-exciting-times-for-collaborative-research-on-port-cities>.

Over time, this maritime mindset has become less evident. The buy-in for port and shipping activities has diminished in many cities as ports are automated and detached from historic locations. The renewal of waterfronts helped maintain a certain awareness of the maritime past and builds on historic forms, but often ignores historic water and shipping practices. A lack of awareness about the implications of water-related practices is highly problematic at a time of climate change-related sea-level rise and changing water patterns. At the same time, maritime and shipping activities can be problematic, causing opposition against port- and shipping-related practices (dredging, infrastructure for logistics, new warehouses). In order to maintain or even stimulate water awareness, and to stay connected to the maritime past, it is necessary to re-negotiate what the maritime mindset entails, and how it can inform creative practices in present day port developments.

In order to better understand the long term development of the maritime mindset, **Thomas van den Brink** researches actors involved in maritime trade such as transporters, traders, brokers and processors of commodities. A dominant drive is an actor's inclination to make profit by increasing volume, reducing expenses and risks, or - in the case of public actors - stimulate maritime trade to increase wealth for citizens, although the fruits are often unevenly distributed. A fundamental characteristic of this mindset could be the ability to create new opportunities and implement novelties. Another distinct aspect of the maritime mindset is an actor's traditions, rituals as celebrations of past maritime successes or future fortune, like the baptism of a ship, a maritime festival or the building of an iconic office or monument. A port city, in this context, can be identified as the spatial clustering and expression of actors within this network.

The maritime commodity trade, however, bears a constant risk of becoming obsolete and uncompetitive, so operating in a commodity ecosystem requires continuous investment. This very phenomenon has made **Vincent Baptist** wonder whether port cities might well be unique among cities in that they vehemently try to cling to and confirm their own status. The persistent threat of industrial obsolescence, at least for large industrial port cities, can be one explanation for this, while the urban inferiority complex that many 'second cities' suffer from might be another, especially with cities like Rotterdam or Marseille.⁵ If this is the case, however, then the construction of a maritime mindset can well be considered a self-fulfilling prophecy, a defensive act to boost the distinctiveness of a port city by simply strengthening one's belief in it. In this respect, it becomes crucial to unravel the specific mechanisms, both bottom-up and top-down driven, that enable this process.

5 Jerome I. Hodos, *Second Cities: Globalization and Local Politics in Manchester and Philadelphia* (Philadelphia: Temple University Press, 2011); Rodrigo V. Cardoso and Evert J. Meijers, "Contrasts between First-Tier and Second-Tier Cities in Europe: A Functional Perspective," *European Planning Studies* 24, no. 5 (May 3, 2016): 996–1015, <https://doi.org/10.1080/09654313.2015.1120708>.

To understand these mechanisms, **Tianchen Dai** suggests viewing the notion and theory of 'mindset'⁶ from the perspective of psychology, where this term has been widely explored and used. The psychological study of mindsets focuses on the individual and examines the self-conceptions people use to structure the self and guide one's behavior. The ways one's beliefs are shaped can greatly influence how one thinks and behaves.⁷ Meanwhile, one's mindset is very much related to personal characteristics and intelligence, which is why it is often discussed in relation to 'motivation' and 'self-regulation'. A maritime mindset, then, can describe personal attitudes, motivations and intentions regarding the maritime environment (or the urban environment connected to the sea). This definition can serve to complement Carola Hein's argument suggesting the intimate link between the maritime mindset and values shared among diverse groups of public and private actors. Clarifying the discrepancies and overlaps between individual mindsets is the key to deliberate a collective mindset, which is shared by diverse actors and can tackle emerging maritime issues based on consent.

Despite their differences, people do often perceive the world in similar ways, says **Hilde Sennema**. Here, we must take a closer look at the word 'mindset': how the mind is set determines how people view or perceive the world. In his book *Art and Illusion* (2002), renowned art historian Ernest Gombrich explains that the mind is set to perceive images in a certain way, with certain expectations. As an example, he uses puppet theatre. As the spectator gets used to the lesser-than-life sized puppets, they startle when they see the hand of the puppeteer, which in relation to the dolls appears to be a giant: "[...] for a moment at least, we had to adjust our perception, since the scale of the puppets had become our norm".⁸ Perception, our 'filtering device' or 'mental set', Gombrich argues, is crucial to the human activity of sense making or attaching meaning. Taking this into consideration, we approach the field of semiotics, the study of signs and sign-using behavior. Seeing 'a city with a port' through a mind that is set on viewing it as a maritime city or a port city, can also change one's attitude towards it.

While Hilde and others consider the maritime mindset as a mental attitude or culture, **Yvonne van Mil** argues that a mindset is also a way of acting - action driven by a certain mindset. From that perspective, the entire spatial concept of the port - the intersection of water and land, port infrastructure, storage facilities, etc. - can be seen as an expression

6 Katharina Bernecker and Veronika Job, "Mindset Theory," in *Social Psychology in Action: Evidence-Based Interventions from Theory to Practice*, ed. Kai Sassenberg and Michael L.W. Vliek (Cham: Springer, 2019), 179–91, https://doi.org/10.1007/978-3-030-13788-5_12.

7 Carol S. Dweck, "Implicit Theories," in *Handbook of Theories of Social Psychology*, ed. Paul Van Lange, Arie Kruglanski, and Edward T. Higgins, vol. 2 (London: SAGE, 2012), <https://doi.org/10.4135/9781446249222>.

8 Ernst H. Gombrich, *Art and Illusion: A Study in the Psychology of Pictorial Representation*, 6th edizione (London and New York: Phaidon, 2002).

of the maritime mindset. Referring to the semiotics Hilde mentions, the physical signs, systems and signposts⁹ of this mindset represent the ideas and processes that shaped the built environment of the port city, yet the ambitions and processes itself are far from local and the scope of the maritime mindset does not stop at the boundaries of the port either. To better understand the maritime mindset and the way it reaches into the surrounding landscape, we need to examine the port - and thus the maritime mindset - at the scale on which it operates, here loosely called the port city territory, or as Hein also calls it, the port cityscape.¹⁰ Reading the spatial signs and systems of the cultural landscape of the port city as the semiotics of the built environment¹¹ helps us to better understand the mindset of the culture itself.

Linking to Gombrich's idea of shifting scales and Van Mil's call for a spatial approach, **Yingying Gan** found that the focus of the maritime mindset could be different on different scales. At the global scale, the economic, social, political, and technological development of the world can be linked to the growth of localities like port cities. However, on the national scale, the key role of port cities or the reasons for the establishment of ports, should be considered differently. Here, the four main causes of port cities (as categorized by Wang, 2010: self-development, newly discovered or developed land, colonized countries, and midway stations or passages for shipping) can relate to a different development with a different mindset.¹² At the local scale, it therefore would be interesting to pay more attention to the networks that are represented within a port city, and the spatial impact they exert.

2. How Mapping Can Help

This spatial impact in cities, regions and other places in maritime networks, is one of the most fundamental ways to combine the many directions in which the maritime mindset can express itself. After all, the way in which different phenomena cluster together in port cities, or the surrounding region, is what determines their unique cultural disposition. As a method that focuses on documenting spatial relationships, mapping makes it possible to combine multiple themes and disciplines. It

9 Nadia Alaily-Mattar, "Port Cities, Architecture and the Return to Water," portcityfutures, November 30, 2020, <https://www.portcityfutures.nl/news/port-cities-architecture-and-the-return-to-water>.

10 Carola Hein, "The Port Cityscape: Spatial and Institutional Approaches to Port City Relationships," PORTUSplus 8 (2019), <https://portusplus.org/index.php/pp/article/view/190>.

11 Donald Preziosi, *The Semiotics of the Built Environment: An Introduction to Architectonic Analysis* (Bloomington and London: Indiana University Press, 1979).

12 César Ducruet and Sung-Woo Lee, "Frontline Soldiers of Globalisation: Port-City Evolution and Regional Competition," *GeoJournal* 67, no. 2 (February 21, 2007): 107–22, <https://doi.org/10.1007/s10708-006-9037-9>; Jean-Paul Rodrigue, "Transportation and the Geographical and Functional Integration of Global Production Networks," *Growth and Change* 37, no. 4 (December 2006): 510–25, <https://doi.org/10.1111/j.1468-2257.2006.00338.x>; James J. (王缉宪) Wang, *Interaction and Development of China's Port Cities (中国港口城市的互动与发展)* (Southeast University Press (东南大学出版社), 2010).



FIG. 1 Map of the South bank of Rotterdam, ca 1930, with Warehouse Santos marked yellow. Via Kadaster.nl.

enables us to see relations that otherwise stay unnoticed. Conversely, it helps to deconstruct or confirm narratives - in both the collective memory and in historiography - that have developed or are created to obtain or maintain a certain status.

Here, we are particularly interested in deep mapping.¹³ A deep map goes beyond traditional mapping methods and leads to a better comprehension of the complexity of space-time interactions. In the 1990s, the term garnered some initial popular interest through the book *PrairieErth: A Deep Map* (1991) by the American historian and travel writer William Least Heat-Moon. In this book, Least Heat-Moon undertakes a vast survey of the Kansas plains to show that the state's landscape and history are not merely related to its spatial, tangible characteristics, but also pertain to experiences, languages, thoughts, memories and expectations. In this sense, a deep map becomes a map of a particular place, rather than a space, that unearths and makes comprehensible the intricacies embedded in a certain locality. The deep mapping approach suits the subjective, culturally embedded, yet often intangible perception that defines the relationships between space, society and culture that result in specific places [Fig. 1].

In the process, however, we have run into certain difficulties applying the original ambition of deep mapping to the concept of the maritime mind-set. The tradition of mapping equally deals with geometrically objective

13 David J. Bodenhamer, John Corrigan, and Trevor M. Harris, eds., *Deep Maps and Spatial Narratives* (Bloomington and Indianapolis: Indiana University Press, 2015), <https://doi.org/10.2307/j.ctt1zxxzr2>.



FIG. 2 Coffee warehouse Santos in Rotterdam. Photo by Hester Blankestijn via Rotterdam Make It Happen

and measurable entities. Measuring and calculating space is also a strong element of maritime culture reflected in practices of triangulation, map making, and determining a ship's location at sea. A deep map should do justice to this side of maritime traditions as well. Meanwhile, mapping the maritime mindset goes beyond geometric 'objectivity' and aims to grasp expressions of shipping and trade, their meanings for the everyday life of port city workers and citizens, and the signposts that have been put in place to maintain the position of a certain place within maritime networks. The multidisciplinary nature of our group allows the map to become truly 'deep', with observations, historical materials and knowledge that interacts and makes the whole more than merely the sum of its parts [Fig. 2].

These parts, then, are specified on layers of a specific location or geographical area. Each layer represents a different theme or perspective and is created by a researcher from a specific discipline. In our current work-in-progress on a deep map of the historical Santos coffee warehouse in the port city of Rotterdam, for example, each of us is collecting data within their research theme. Van den Brink collects data on the commodity chains and companies, Sennema collects sources on the relationships between these companies and individuals within the city, Van Mil on the different spatial scales where the coffee trade took place and on Santos as a 'signpost', and Baptist on the movement of workers around the building and within the nearby pleasure district of Katendrecht. These sources can be geodata, but also photographs, artworks, company documents, or even touristic postcards. Bringing these data together requires coordinated language, which is Dai's task: she attunes different meanings and concepts by creating a glossary. Moreover, she analyzes the value attached to this building as a national monument. In this way, we expect to identify variables that help in creating a mapping methodology [Fig. 3].



FIG. 3

Café Pretoria with warehouse Santos in the background, 1929: a deep map allows to chart the movements of users of a certain building. Photo by F.H. van Dijk, Gemeente Rotterdam (Stadsarchief) CC-0.

Our ideal is to apply deep mapping in such a way that it results in discovering new spatial, social and cultural patterns by combining specific one-dimensional datasets that relate to specific themes. We thus hope to integrate different themes, disciplines, scales and scopes, and stimulate debate between scientific disciplines and experts on what makes a maritime mindset. The outcome of such a methodology is a granular assessment of the context of a certain space or an artefact, making intangible aspects tangible. This allows us to see beyond narratives in history books, and therefore shed light on the development of - in this case - port cities and other places within maritime networks. This functionality, moreover, enables interdisciplinary collaborations that combine different approaches. Finally, deep mapping is an imaginative way of reaching out to a broader audience - as is the case with research projects such as the European and Amsterdam Time Machine, and A Deep Map of the English Lake District for instance - and potentially add data collected by citizens themselves.

Conclusion

One conclusion to our roundtable is that the maritime mindset (as both Baptist and Van den Brink note) often relates to the maintaining of a competitive position within the maritime world. The fear of losing this position and becoming obsolete due to developments in maritime trade and industries is an important driver for port city-related or maritime policies. This focus on maintaining positions and status, however, often leads to a top-down set of values and narratives that does not necessarily have the best interest of the citizens of a port city in mind. The maritime mindset, therefore, is neither intrinsically good nor bad. A collective mindset, which is a mosaic of individual mindsets, does require a coordination of concepts in order to be able to tackle emerging challenges. This requires a certain flexibility as well. As we saw with the example of Gombrich's puppeteer, a mindset is not actually 'set', but recognizing a certain mindset is necessary to be able to distinguish between different meanings, scales and contexts.

To be able to identify, recognize and reflect on the characteristics of a maritime mindset, we have come up with a set of clarifying questions, as a first step to a methodology. Instead of absolute dichotomies, these questions seek a position about dualities on a gradual spectrum:

1. Whose mindset? (individual or collective)
2. Who decides? (top-down or bottom-up)
3. Who benefits? (business or elite interests, common good)
4. Which scale? (local, regional, national, global)
5. To what end? (self-interest and/or self-image)
6. With what consequences? (desirable or undesirable, and for whom)
7. Tangible or intangible? (are the "expressions" of the mindset buildings and artefacts, or stories, values and narratives)

The questions whose mindset it actually is, and for whom a certain mindset works, are crucial to determine what the mindset is or should be. It is one of the most open questions within this spectrum, and needs constant evaluation. Mapping can help do this: in analyzing the history of a certain place, but also through involving groups and individuals that are less likely to appear in the dominant histories of maritime trade. We believe that our approach can play a role in producing a more layered spatial, social and cultural understanding of the complex nature of port cities. If used correctly, it can serve as an open and democratic tool to reflect on port city policies, practices and the built environment. A discussion about mapping can bring people around the same table, but also potentially include the tacit knowledge of citizens and practitioners.

Hilde Sennema studied Art History and specialized in post-war urban planning and governance. After working in the heritage sector, she started her PhD research at the Erasmus University with Paul van de Laar. Her topic is the public-private governance network that modernized and rebuilt the port city of Rotterdam between 1930 and 1970. Her dissertation is co-supervised by Carola Hein (TU Delft) and business historian Ben Wubs (EUR). For the inter-university Center for Port City Futures, she is blog editor and member of the coordination team. Besides her research, she has been working as a publicist for among others *Vers Beton* and *Het Financieele Dagblad*.

Vincent Baptist is a PhD candidate at the Department of History in the Erasmus School of History, Culture and Communication (Erasmus University Rotterdam). His doctoral research is part of the European HERA-funded project 'Pleasurescapes: Port Cities' Transnational Forces of Integration'. He is affiliated to the Leiden-Delft-Erasmus research center 'PortCityFutures', and acts as co-editor of the group's research blog. Vincent previously worked as a Pre PhD fellow in the digital humanities research program CREATE (University of Amsterdam), where his research was partially linked to the CLARIAH Amsterdam Time Machine project. He holds a Research Master in Media Studies (University of Amsterdam).

Tianchen Dai worked as a visiting researcher from November 2016 to November 2018 and a postdoctoral researcher from March 2020 to November 2021 at the Faculty of Architecture and the Built Environment, Delft Technical University, The Netherlands. Her specific research interests lie in the spatial narration of urban landscapes, and its impact on the formation of mindset, city image, and behavioural intentions, especially in port cities. She is now a Tenure Track Associate Professor in School of Design, East China Normal University in Shanghai, China.

Yingying Gan is a PhD candidate at the faculty of Architecture and Building Environment of Delft University of technology. Her doctoral research is supported by China Scholarship Council (CSC). The research is about hospital development in fast urbanizing cities, which is co-supervised by Cor Wagenaar (TU Delft and University of Groningen) and Esther Gramsbergen (TU Delft). Her research interests are about healthy city and related architectures and has co-edited *lean planning: Shenzhen hospital construction and urban future*. Besides, she is a research member of "Port City Futures" in Leiden-Delft-Erasmus research center.

Yvonne van Mil studied Architecture at TU Delft (MSc) and specialized in public realm. After graduating, she continued her interests as an independent researcher and cartographer affiliated with TU Delft. Her research focuses on urban and spatial planning in the 19th and 20th century, with specific attention to regional history and geo-spatial mapping. She has co-authored several books, including *Driven by Steel. From Hoogovens to Tata Steel 1918-2018* (2018) and contributed chapters to the *Atlas of the Dutch Urban Landscape* (2014).

Thomas van den Brink has been a member of the PortCityFutures group since 2020. In his PhD, he develops a deep mapping approach to identify port city culture through the lens of commodity ecosystems. He was educated as a historical geographer at Utrecht University and specialised in landscape history at the University of Groningen. He also did a minor in archaeology and followed courses on heritage and space at the Vrije Universiteit. After graduation he continued to research the relation between time and space at Wageningen University and TU Delft and by carrying out projects with his company: *THOM - Telling History with Original Maps*.

Carola Hein is Professor of the History of Architecture and Urban Planning at Delft University of Technology. She has published widely and received a Guggenheim and an Alexander von Humboldt fellowship as well as other major grants. Her books include *The Urbanisation of the Sea* (2020), *Adaptive Strategies for Water Heritage* (2019), *The Routledge Planning History Handbook* (2017), *Uzō Nishiyama, Reflections on Urban, Regional and National Space* (2017), *Port Cities* (2011), *The Capital of Europe* (2004), *Rebuilding Urban Japan after 1945* (2003), *Cities, Autonomy and Decentralisation in Japan* (2006), and *Hauptstadt Berlin 1957-58* (1991).

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