

**When “port-out – city-in” becomes a strategy
is the port–city interface conflict in Amsterdam an observation or a self-fulfilling prophecy?**

Van den Berghe, K.B.J.; Louw, E.; Pliakis, F.A.; Daamen, T.A.

DOI

[10.1057/s41278-022-00236-8](https://doi.org/10.1057/s41278-022-00236-8)

Publication date

2022

Document Version

Final published version

Published in

Maritime Economics & Logistics

Citation (APA)

Van den Berghe, K. B. J., Louw, E., Pliakis, F. A., & Daamen, T. A. (2022). When “port-out – city-in” becomes a strategy: is the port–city interface conflict in Amsterdam an observation or a self-fulfilling prophecy? *Maritime Economics & Logistics*, 25(2), 330-350. <https://doi.org/10.1057/s41278-022-00236-8>

Important note

To cite this publication, please use the final published version (if applicable).
Please check the document version above.

Copyright

Other than for strictly personal use, it is not permitted to download, forward or distribute the text or part of it, without the consent of the author(s) and/or copyright holder(s), unless the work is under an open content license such as Creative Commons.

Takedown policy

Please contact us and provide details if you believe this document breaches copyrights.
We will remove access to the work immediately and investigate your claim.

Green Open Access added to TU Delft Institutional Repository

'You share, we take care!' - Taverne project

<https://www.openaccess.nl/en/you-share-we-take-care>

Otherwise as indicated in the copyright section: the publisher is the copyright holder of this work and the author uses the Dutch legislation to make this work public.



When “port-out – city-in” becomes a strategy: is the port–city interface conflict in Amsterdam an observation or a self-fulfilling prophecy?

Karel Van den Berghe¹ · Erik Louw¹ · Filip Pliakis² · Tom Daamen¹

Accepted: 25 May 2022

© The Author(s), under exclusive licence to Springer Nature Limited 2022

Abstract

Within the majority of port city literature, the evolution of port cities is still explained as an inevitable or ‘logical’ process whereby maritime land-uses gradually migrate from city centres towards waterfront zones with deep water access. Between the 1950s and 2000s, obsolete port areas around the world have surely become waterfront redevelopment sites, often with high-end urban property development, signified by iconic architectural projects. As observed and described in the port city of Amsterdam, the financial-economic success of this ‘port-out, city-in’ process has led to land-use conflict, observed also in other port cities around the world. This paper questions, however, whether the land-use conflict in Amsterdam, observed ten years ago, is just an observation, or part of a self-fulfilling prophecy. To answer this question, we engage in a meta-discussion about the port–city interface model itself. By performing an in-depth case study in the 2018–2019 period, we reconstructed the evolution of a fierce land-use conflict in the port–city interface of Amsterdam. We conclude that the key causal mechanism was context-specific, but also that generic ‘port-out, city-in’ discourse has been an important contingent condition.

Keywords Waterfront redevelopment · Port–city interface · Amsterdam · Generalisation · Abstraction

✉ Karel Van den Berghe
K.B.J.VandenBerghe@TUDelft.nl

¹ Delft University of Technology, Julianalaan 134, 2628 BL Delft, The Netherlands

² Local, Bezuidenhoutseweg 27-29, 2594 AC Den Haag, The Netherlands



1 Introduction

“[there is] a mutual interpretative interplay between social science and those whose activities compose its subject [...] The theories and findings of the social sciences cannot be kept wholly separate from the universe of meaning and action which they are about.”

(Giddens 1984, xxxii - xxxiii).

While the two terms are often mixed, there is a fundamental difference between ‘generalisation’ and ‘abstraction’ (Gong and Hassink 2020). Generalisation is the process whereby descriptive summaries of a given situation, or extrapolations, roughly explain or predict what other situations might be like (Sayer 1997). Mostly, it is assumed that theorizing needs generalisations of relations among empirical objects and events (Gong and Hassink 2020, p. 6). However, there is a significant risk that generalisation goes along with reductionism, whereby the observed contingent generalisations are seen as necessary causal mechanisms (Yeung 1997). In other words, the generalisation itself becomes a self-fulfilling prophecy (Ferraro et al. 2005; Merton 1948; Giddens 1984). Therefore, to identify the true causal mechanisms, and understand if—or if not—trans-contextual elements in the observations are relevant, the process of abstraction is more appropriate (Gong and Hassink 2020). Abstraction is the process whereby causal mechanisms and structures, and their specific contingent conditions, are uncovered. This is not an easy thing to do, because these mechanisms, structures and conditions are usually hard to observe or experience (Hassink 2019). While generalisation is often a ‘simple’ descriptive summary, abstraction instead needs to reveal the deeper (ontological) structure of a phenomenon and identify its contingent circumstances (Barnes and Christophers 2018). Only then can trans-contextual relevance be achieved or, in other words, can a theory emerge that has validity beyond the original particular context (Hassink 2019; Yeung 2019a, b). From that moment, a theory is, however, not a given, but remains part of a process of critique, understood as a never-ending process of (re)conceptualisation through affirmation, expansion or contestation (Massey 1984).

Considering the above, this paper focuses on a particularly persistent theoretical concept: the port–city interface model. This model is based on the ‘Anyport’ model of Bird (1963) and elaborated, as we explain in the next section, some three to four decades ago by Hayuth (1982), Hoyle (1989) (updated by Hoyle 2000) and Norcliffe et al. (1996). Its persistence can be evidenced by a Scopus database search, conducted on 10/03/2022, where Bird (1963) counted 177 citations; Hayuth (1982) 63 citations; Hoyle (1989) and (2000) 278 (153 + 125) citations; and Norcliffe et al. (1996) 79 citations. Although these authors developed their port–city interface models from a variety of perspectives, they all essentially set out to describe and visualise a common spatial evolution of port cities across widely different contexts.

The authors cited above observe a change in the historic, so-called spatial symbiosis between mediaeval ports and cities—places where no clear spatial



distinction between the maritime and the urban economy existed (Norcliffe et al. 1996, p. 124). Because upscaling and specialisation processes accelerated significantly from the 1960s onwards, maritime land-use functions like warehouses and factories were relocated towards deeper waters further along the coast or downstream a river or canal. This caused port land-uses to move away from urban centres, vacating the older docks and shipyards, often resulting in brownfields along the urban waterfront. The next step that the cited authors describe is that, over a few decades, urban land-use functions such as residential, commercial or leisure functions have come to replace these former maritime land-use functions. This spatial-functional evolution of the port city waterfront can arguably be labelled a ‘port-out, city-in’ model (Van den Berghe and Daamen 2020).

While Hayuth (1982) describes the ‘port-out, city-in’ evolution textually, Hoyle (1989) proposes the port–city interface model with five stages, and Norcliffe et al. (1996) develop a model using three phases to explain the same phenomenon. Hence, as described above, the latter two works used their observations to generalise their findings, synthesised eventually in a model. Beyond their observations, the resulting model thus explains what the evolution of other port–city interfaces could be like, effectively giving it a prescriptive quality.

As we elaborate below, since the 1990s, authors have sought to explain how their empirical observations fit or differ from earlier port–city interface models. The work of Wiegman and Louw (2011) is notable (cf. 58 citations). Their paper not only confirms that the spatial evolution of the port–city interface in Amsterdam, The Netherlands, fits the model of Norcliffe et al. (1996). They also argue that the existing model can be supplemented with a new phase, namely a land-use conflict phase between port and city. Evidence shows that in Amsterdam, the downstream movement of maritime land-use functions was being overtaken by advancing urban land-use functions. This results in an institutional land-use conflict between authorities who, on the one hand, are responsible for protecting land for maritime functions and, on the other, have the responsibility to plan for redevelopment opportunities based on residential or commercial land-use politics and economic demands. In the literature, such conflicts—and various responses to them—have been intensely studied from various academic perspectives (Van den Berghe et al. 2018; Hesse 2013; Hall and Jacobs 2012; Daamen and Vries 2013).

In this paper, we do not intend to confirm, adapt or reject the port–city interface model and the associated land-use conflicts observed in practice. Our goal is to engage in a meta-discussion on the port–city interface model itself, and how it relates to political and economic land-use debates in contemporary port cities. In doing so, we want to explore to what extent the model can be regarded as a generalised observation, or if the model has become a self-fulfilling ‘port-out, city-in’ prophecy.

To proceed, we take the port–city interface (conflict) model of Wiegman and Louw (2011) as a starting point, subsequently going deeper into identifying causal mechanisms and structures, and the specific contingent conditions under which these occurred. The research question therefore is: *to what extent is the port–city interface model and the associated land-use conflict a self-fulfilling prophecy?* Important to note is that the start and end-point of this article are the same. We will not develop



our research to observe the land-use conflict (again). As explained before, we go beyond the generalisation process and embark in the process of abstraction. As the quote above this article explains (Giddens 1984), it is worth mentioning that this (hypothetical) ‘turn’ from an ‘objective’ observation towards a ‘normative’ self-fulfilling prophecy (Merton 1948) is not new within social (Ferraro et al. 2005) or geographical sciences (Massey 1979); quite the contrary. Indeed, as argued by Rodríguez-Pose (2011) “‘one-size-fits-all’ approaches are anathema” (Hassink 2019).

This paper continues as follows. In the next section, we give a brief overview of existing port–city interface research. We explore how to focus on causal mechanisms and introduce our analytical framework. In the third section, we introduce our case study, the port city of Amsterdam. We end with a discussion and conclusion.

2 Literature

2.1 Spatial developments in the port–city interface

The origin of port–city interface models can be found in the Anyport model of Bird (1963). In this model, Bird describes the morphological development of port in six stages (Bird calls them ‘eras’), each involving an addition to, or change in, the physical layout of the port, and helping to build up to the complex pattern of a modern major port. Bird explains that each of the ‘eras’ was marked by the growth of shipping volume, or technical advancements in the carriage of goods by sea, or of cargo-handling in ports. In each era, the new port facilities were built increasingly downstream, compared to the former ‘era’, resulting in a growing geographical separation of port and city. The model has been tested in a variety of different contexts (Hoyle 1968), while the separation was also observed by Robinson (1985), in the development of Asian ports, and in Canada by McCalla (1983).

Although the *Anyport* model does explain port development, it does not mention the port–city interface as such and does not pay attention to the changing spatial and functional relation between the port and the city. As far as we know, it was Hayuth (1982) who first mentioned the term port–city interface but not the first who indicated that this interface spatially, in state of transition. Or, as Hesse (2017, p. 211) stated “...city and port, started to dissociate, often reinforced by waterfront regeneration”. Various authors identified several different stages in the transition process of the spatial port–city interface (see for an overview Wiegmans and Louw 2011). Based on the work of Norcliffe et al. (1996) and their research in the port–city interface of Amsterdam, Wiegmans and Louw developed a spatial model of how the four states of the transition of the port–city interface are captured (see Fig. 1). In the first phase, there is spatial and functional symbiosis between the port and the city. In the next phase, the port and city start to dissociate spatially, although there is still a certain overlap. In the third phase, this special overlap has gone and the port land near the city becomes prone to obsolescence and dereliction. In this stage, initial waterfront redevelopment projects appear. In the fourth and last stage, redevelopment projects increase in scale in way that, again, a spatial-functional overlap between city and port appears. At this stage, however, this overlap is not symbiotic, but rather



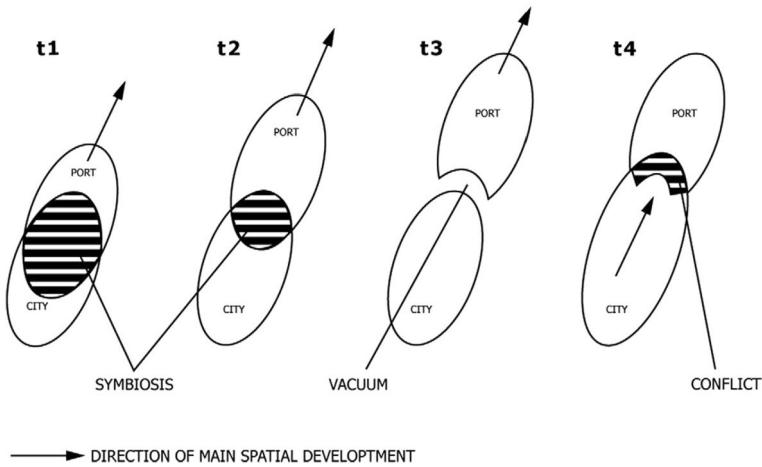


Fig. 1 The port–city interface model of Norcliffe et al. (1996), expanded by Wiegmans and Louw (2011) with a t4 spatial conflict phase (Wiegmans and Louw 2011, p. 582)

hostile. The spatial driver in the interface is no longer the economic and technological changes of the port, as shown by the Anyport model of Bird (1963), but the economic change and growth of the city, resulting in a high demand for commercial real estate and housing. Port areas that are still in use are actively acquisitioned by property developers and local government, to facilitate this development. Housing developments in these areas also impose environmental conflict in terms of port-generated risks and hazards (particular noise and odours).

Beside the pressures of city development, the fourth phase is also influenced by barriers that restrain the port to move ‘downstream’, as the Anyport model assumes possible. These barriers may include five environmental conflicts according to Bartłomiejski (2016): conflicts for conservation of biodiversity, conflicts over coastal defence, conflict over port-generated risks and hazards, conflicts over land-use change and conflicts over access. In the case of Amsterdam, there is a conflict about land-use: the only port expansion possible is on a site that was created as a kind of recreational zone that should function as a buffer between the port and agricultural land. According to Merckx et al. (2003) such a case “...a mixed-use scenario for waterfront redevelopment is the most likely outcome, thereby leaving the port with some room to rehabilitate older port areas to form integral parts of a wider port complex.”

The models of the port–city interface suggest a direct relationship between port form and port function, while port space is seen as a chronological and linear succession of historically distinct development phases (Olivier and Slack 2006). These phases conceal a heterogeneous reality, which is also recognised in the epistemology discussion about port geography (Olivier and Slack 2006; Ng et al. 2014) and the interdisciplinary perspective on port-cityscapes, as discussed by Hein (2013).

On their literature review on port geography and port geography research, Ng et al. (2014) found four main themes:

- Hinterland's and the port's role in intermodal transportation and supply chains.
- The operation of ports.
- The port's location and port–city/territory relationship and port management (including waterfront redevelopment and port-urban land-use conflicts).
- Policy and governance.

In this paper, we focus on the last two themes. The third theme includes waterfront redevelopments and the port–city interface models. After the publication of the review by Ng et al. (2014), new but related conceptualisations of the interface such as ‘port city threshold’ and ‘port city porosity’ were introduced which are related to their third theme. The term porosity is derived from urban studies and can according to Hein (2021) “.....be seen as a way to overcome the modernist separation of functions and the introduction of hard boundaries between specific spaces that have led to the increase of traffic and socio-economic segregation”. The origin of the threshold concept can also be founded within urban studies but stresses the meaning of borderscapes (literally landscapes of the border) between port and city and can help to identify governance patterns such as capabilities of Port Authorities (Moretti et al. 2019). In this way, both concepts touch upon the fourth theme of ‘policy and governance’, which includes analysis of institutions and policies which are part of the context in which actions and decisions of (public) stakeholders take place.

An important part of the fourth theme is the shift in port governance models under the influence of neoliberal ideology which focusses on Port Authorities (e.g. Verhoeven 2010). However, it is not only the Port Authority which influences the port–city interface, but also the local government. In the literature, far less attention goes to how these local governments influence and shape the interface, compared to direct port-related agents. Their role only comes to the fore in the governance and planning of waterfront development, in the vacuum between the port and the city. In this way, external economic (excluded transport economics) and social forces that influence the development of the city are beyond the research scope of current port city research. In the following section, we analyse the causal mechanisms of the port–city interface model, and particularly give attention to the ‘city side’ of the port city threshold in the port–city interface of Amsterdam.

2.2 Causation: structure, process and mechanism

As explained in the introduction, our attempt is not to agree, modify or disagree with the port–city interface model as such, but to engage in a meta-discussion on whether the model is an observation or part of a self-fulfilling prophecy, namely the port city land-use conflict. To go beyond generalisation and follow the process of abstraction, we need to focus on the causal mechanisms, and the contingent conditions under which these occurred. As argued by Yeung (2019a), there has been an undertheorising of the role of mechanisms in causal explanation and its relationship with context (Van den Berghe 2018; Hassink 2019; Sunley 2008; Jones 2009). Mechanisms play thus a necessary role in explanatory theories, but are often conflated with process in existing geographical literature (Yeung 2019b). Process-based



theories merely describe empirical events without answering the ‘why’ and ‘how’ question. Arguably, the majority of port–city (interface) models fall in this category. In other words, the process doesn’t answer the question what mechanisms ‘for’ the process occurred. Causation here is not understood from a positivist view, whereby one searches for regularities within a closed system, but within an open social world where the same causal powers can produce different outcomes, and vice versa (Martin and Sunley 2015; Pratt 2009). This is also known as the principle of *contingency* that implies that events are dependent on contingent conditions because other mechanisms can trigger, block or modify the mechanisms observed. We turn to the work of critical realist Sayer (2000) which explains the differences between structure and effect, and the causal mechanisms under which conditions that connect these two (Fig. 2).

2.3 Proposing an analytical framework

As explained, we take the port–city interface model of Wiegmans and Louw (2011) as a given. Or differently said, we take the process as a given. What we are more interested in is to dive into the process (of Amsterdam) to reveal the causal mechanisms ‘between’ the observed phases and the conditions under which they occurred. We, therefore, present our analytical framework in Fig. 3, a combination of work of Wiegmans and Louw (2011) and Sayer (2000, p. 15) as presented above, where each phase is an analytical ‘starting point’ structure and an ‘ending point’ effect, connected by causal mechanisms.

2.4 ‘Haven-Stad’ Amsterdam

In the following section, we analyse the case study of the port–city interface in Amsterdam and the structure and effect, and the casual mechanisms connecting

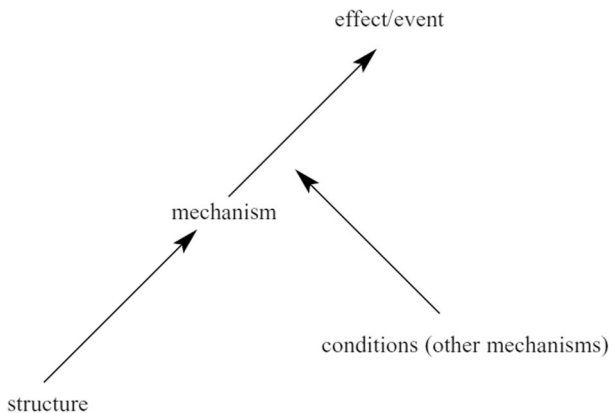


Fig. 2 The process of causation, taking into account the structure that possesses the agency the causal mechanisms under specific contingent conditions, resulting in an effect (Sayer 2000, p. 15)



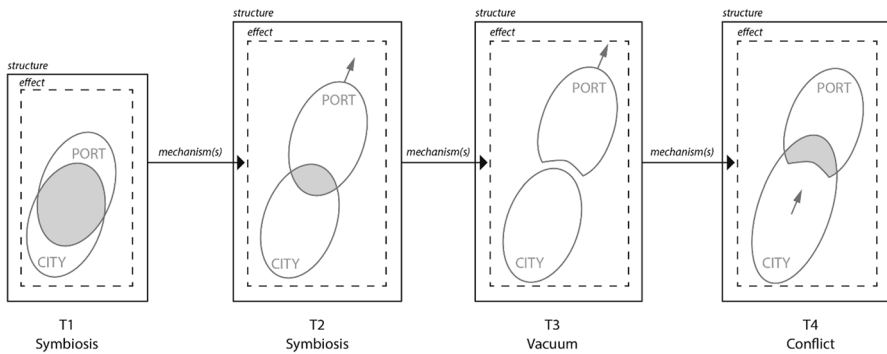


Fig. 3 The port–city interface evolution, wherein each phase (Tx) is both the starting point (structure) and end result (effect), connected by causal mechanism(s) (source: authors, adapted from (Sayer 2000, p. 15) and Wiegmans and Louw (2011))

these two. The empirical research was done in 2018 and 2019, including 13 interviews with municipal politicians and civil servants, document analyses and observation of political debates in the Municipal Council of Amsterdam (Pliakis 2019). Hence, this article takes into account the structures, causal mechanisms and effects until 2017.

2.5 Structure and effect: the port city of Amsterdam

2.5.1 The establishment and growth of the port city of Amsterdam

The port of Amsterdam is the second largest port of the Netherlands (Rotterdam is the largest Dutch port, both in area and in throughput). The history of the port city goes back at least to the seventeenth century, when Amsterdam became the most important Dutch city during its so-called golden age, during which The Netherlands, among others, was an important colonial and trade nation. Amsterdam at that time became, next to London, the main port city in Europe, centred around the banks of the Zuiderzee (cf. T1, Fig. 3). In particular, here is also the role of the Dutch East India Company, who established a worldwide trade network. Amsterdam expanded significantly and experienced an increase of 30,000 to 210,000 inhabitants in less than one century. During the eighteenth century, Amsterdam consolidated its wealth, but this ended abruptly with the French occupation from 1795 onwards, which implied the end of many of the Dutch colonies and consequently trade networks. Also Amsterdam's natural connection to the North Sea, via the Zuiderzee, declined considerably, hindering the arrival of ships. In 1813, the French occupation ended and this marked the start of the United Kingdom of the Netherlands, comprising Belgium and The Netherlands. Brussels and Amsterdam acted as capital cities. The United Kingdom thrived, increasingly with the growth of the port city of Antwerp as focal point. Nonetheless, large infrastructure works were performed to also facilitate the other port cities. For Ghent, the canal Ghent-Terneuzen was constructed. For



Amsterdam, the new North Sea Canal from Amsterdam to IJmuiden was opened in 1876.

Because of the opening of the new canal towards the west, the historical IJ bank became towards the end of the nineteenth century less sufficient (Carasso-Kok et al. 2004). Here for the first time arguably port functions started to move towards the west and north of the city centre (cf. T2, Fig. 3), while simultaneously new large residential development plans were launched to expand the city (Willink 1998). This was further accelerated by the opening of the new steel plant in IJmuiden in 1918, but also in general, trading activities thrived (Ducruet et al. 2018) and Amsterdam, as many other port cities, established new built docks and terminals outside the city centre. The economic crisis during the 1930s and the Second world War slowed down the implementation plan of both port and city (Kahn and van der Plas 1999).

After the war, the roll out of the Marshall plan was crucial. Because the industrial complex in the German Ruhr area was included, and thus needed the import and export of goods, Antwerp, Rotterdam and Amsterdam experienced a significant growth in throughput (Gosman 2015). Gradually, Amsterdam became a strong industrial port area, with focal points in steel-making, ship construction and petrochemical activities. However, during the second half of the twentieth century, this started to change. Important was the major fire at the Marbon chemical plant in the Westpoort area in 1971, killing nine people. Public and political opinion changed drastically, and from that moment, Amsterdam stopped distributing land built permissions to (heavy) industrial and petrochemical production plants. Thriving on the growing demand for fuels and global transport in the then accelerating globalisation, the focus of Amsterdam was increasingly on logistical functions. In particular, Amsterdam specialised in the storage and blending of refined oil products (Van den Berghe et al. 2022). This made the port expand further towards the west.

At the same time, Amsterdam expanded by building suburban new towns. As a consequence, by the mid-1980s, Amsterdam lost about 20% of its inhabitants (Musterd 2006). The older urban port areas also became increasingly obsolete, as warehouses and industrial areas closed or relocated to the west. The so-called IJ banks, on both sides of the river, are of particular interest here.

2.5.2 Rediscovering the Waterfront (1985–2003)

In 1975, the first official steps were taken to transform the so-called Eastern Docklands into housing a district, with a decision of the Municipal Council. The redevelopment started in the early 1990s (cf. T3, Fig. 3). In this timeframe, there was a general rediscovery of the urban waterfront. This was combined with the decentralisation of urban planning. Urban planners in Amsterdam were given more independence and control over how the city should develop. One of their first ideas was to transform all port lands within the city’s highway rim into residential areas. However, the first studies concluded that urban expansion in active port was not feasible. This was at a time when the port had still large amounts of vacant land, and newly developed deep-sea docks available downstream towards the North Sea. Port redevelopment was afterwards focused on brownfield areas and abandoned port sites in the Eastern Docklands. Several former docks were successfully transformed into



residential neighbourhoods (see Hoppenbrouwer and Louw 2005). The municipality and its citizens rediscovered the city's waterfront as a new and interesting place. Starting in the 1990s, redevelopment took a relatively long time. In 2021, the last plots in the Eastern Docklands were transformed into housing. The transformation will probably be completed in 2030, thus 40 years duration in total.

During the transformation of the Eastern Docklands, the planners were already looking towards the west. At the end of the 1990s, the first plans were drawn to expand the city westwards into the abandoned port area Houthavens. The initial plans contained 900 houses, but this number increased step by step to 2400 in 2006. Unlike the developments in the Eastern Docklands, the Houthavens are located next to an active port area that was still, and would remain, in use: the Coenhaven and Vlohaven, part of the heavy industrial port area 'Westpoort'. The plans proposed to transform the docks between the Houthavens and the Westpoort (called the Minervahaven) into a new industrial zone for medium-sized businesses. The Minervahaven would act as a sound barrier between the port and the new residential district in the Houthavens, with buildings of up to 12 m high. At the same time (around 2001), the port areas in the west were expanded with a new basin (Afrikahaven) and calculations were made about the costs of moving port companies from the Coen- and Vlohaven to this new site further downstream. However, in 2003, the alderman and the Port Authority concluded that actively moving port companies towards new port lands further west away from the city would be too expensive (estimated at €650 million, excluding costs for acquisition, demolition and compensation to terminate ground lease contracts).

2.5.3 Towards the Structure Vision 2040 (2006–2011)

As urban redevelopment projects inched closer towards port companies in the Coenhaven and Vlohaven, conflicts between city and port increasingly emerged. Seeing the plans, port companies in the Coenhaven and Vlohaven feared that new residents near the port would complain about noise and dust, which would require reducing their industrial activity. Companies started to protest against the transformation of various semi-abandoned and less industrial areas near the port (Houthavens and NDSM Wharf). Here the conflict T4 really starts (Fig. 3). In a formal-judicial process and after long lasting legal battles, port companies successfully blocked urban transformation of nearby port lands. A mediation process between port companies, the municipality and the Province of North Holland ended in January 2009 with an agreement: the 'Covenant Houthavens/NDSM Wharf' (Province of North Holland 2008). Port companies agreed to stop protesting against the transformation of Houthavens and NDSM Wharf, and in return, the municipality would stop with planning new residential areas near the Coenhaven and the Vlohaven for the next 15 years (cf. until January 2024), not bringing any of these plans into procedure for the next 20 years (cf. January 2029). This covenant would become an important aspect of port–city discussions in the future.

However, around the time the 'covenant' was signed, new studies for westward urban expansion on port lands had already started. The preparation of a new long-term urban vision for the city (Structure Vision 'Amsterdam 2040') (Gemeente



Amsterdam 2011) was reason to start again researching the opportunities of urban transformation of port lands. This assignment was given by the new council of the city of Amsterdam, after the elections of 2006. Responsible alderman for urban planning was from the Green Party (GroenLinks), who initiated the proposal, backed by a deliberately vaguely formulated sentence about studies for westward development of the city in the 2006 coalition agreement (Gemeente Amsterdam 2006).

2.5.4 Transformation Scenarios and feasibility (2011–2013)

The proposal included the idea to establish a project team of both urban planners and representatives of the port authority. The project team would develop scenarios for the future of port areas within the city’s highway rim, called Haven-Stad (Port-City) (Fig. 4).

The project team developed three scenarios, ranging from almost zero to the entire urban transformation of port areas within the highway rim around the inner city. To assess the financial impact of the scenarios, the Land Department did a financial exercise for the development of these three ‘versions’ of Haven-Stad. It is remarkable that the financial outcome, with costs and benefits, was extremely negative in all scenarios (Table 1).

All three scenarios showed the relatively high price to redevelop the area. Specifically, scenarios two and three showed clearly how much it costs to redevelop the

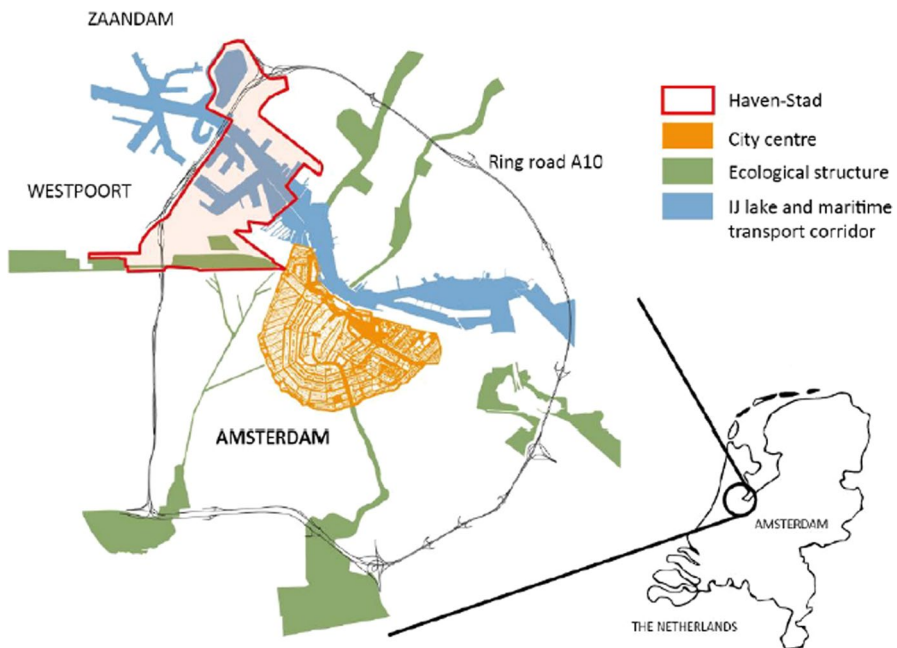


Fig. 4 The Haven-Stad area in Amsterdam, during last decades subject of increasing urban development plans within existing port areas, located in the west of the city, or east of the port (Gemeente Amsterdam 2017).



Table 1 Estimated costs and profits in the three scenarios for Haven-Stad, in million Euros (Gemeente Amsterdam 2009)

	Scenario 1	Scenario 2	Scenario 3
Transformation (acquisition)	– 1.162	– 2.033	– 3.098
Infrastructure	– 39	– 128	– 262
Replacement port companies		– 743	– 850
- <i>Development terrain</i>		– 61	– 74
- <i>Terminal establishment</i>		– 43	– 60
- <i>Nautical establishment</i>		– 93	– 101
- <i>Buildings and installations</i>		– 546	– 615
Profits	522	1.235	1.989
BALANCE	– 679	– 1.669	– 2.221

The italics in the table are subdivisions of the category ‘Replacement port companies’

existing port area into an urban area with predominantly residential and commercial functions. The reason why in scenarios two and three port companies would have to move was because the area redevelopment implied the loss of deep water terminals and quays, assets port companies still use today. In other words, especially scenarios two and three showed that the idea of a co-existence of port and city in the Haven-Stad development is practically impossible.

It is remarkable that, out of the three scenarios, in 2011, the city council chose the most rigorous urban transformation option of scenario 3. The council backed-up this scenario by connecting it to the then launched idea of hosting the Olympic Games of 2028. In this plan, the main Olympic stadium was planned right on the docks of the Coenhaven. The port authority and port users protested heavily against this proposal, stating it was ‘against everything that was agreed’ in the covenant of 2008. Finally, in 2013, after a new round of studies including housing density, pace, phasing, termination of lease hold contracts and costs for relocation of port companies, it was reaffirmed that Haven-Stad would be a slow and phased redevelopment process, respecting the covenant.

2.5.5 Development strategy (2015–2017)

The last episode (2015–2017) was the creation of the Development Strategy, this time by the municipality only. Due to the quickly increasing housing prices, politicians urged urban planners to look for additional sites for housing development. A motion in the city council prompted the municipality’s urban planners to investigate the possibilities to increase the housing density in the existing Haven-Stad Transformation Strategy. They concluded that there was space for the development of 40,000–70,000 houses—an impressive increase from the initial 900 houses—in Haven-Stad (Fig. 4). The particularity is that this faster and larger residential (re)development was also foreseen to be developed in the areas ‘protected’ by the



covenant. The ‘trick’ was the application of ‘new’ spatial environmental regulations, part of the Dutch ‘Crisis- and Repair Law’ from 2008, later on becoming a temporary law towards the foreseen new Environmental Law (for more information, see Boeve 2017). With these new regulations, it became legally possible to mix residential and industrial functions near each other. Moreover, port companies could remain until 2040, as agreed, but environmental restrictions (cf. noise, smell) were relaxed to allow nearby housing. While the presence of the companies remained intact, as a consequence though, companies lost potential expansion options following this reduction. Important is that the municipality did not inform port companies about adjusted development plans for Haven-Stad, nor did they consult market parties such as investors. The Haven-Stad Development Strategy was rushed through the city council before the Christmas holidays, without any serious debate.

2.6 Causal mechanisms: the emergence of Haven-Stad as a land-use conflict between port and city

Although most people have only heard of it recently, the idea of Haven-Stad originates as early as the late 1990s. In this period, the municipality of Amsterdam was given the opportunity to experiment with a formal planning instrument called ‘Structuurvisie’, to define its strategy for particular urban development zones. Before that time, *structuurvisies* were formally part of regional planning documents issued by the Province of North Holland. Quickly, in 2002, the municipality’s ideas about the transformation of the western part of the city started to differ from those proposed by the Province. These first ideas failed, though, as port companies successfully objected to these inconsistencies. Moreover, in 2003, the Province, having this authority, ‘cancelled’ the transformation proposal of the municipality (Province of North Holland 2003, p. 34):

Seen the existing uncertainties for the companies and the spatial and financial consequences of transformation, in accordance with the Municipality of Amsterdam, we cancel the transformation of this area for now and for the long term.

The main points on which the plans were cancelled were related to the environmental regulations, and related spatial zoning, forbidding residential functions around companies. One would expect that at this moment, the discussion would be closed. However, the reason why the municipality of Amsterdam continued these westward urban expansion plans was because in 2006 the Green Party entered the coalition; a party that in general is less supportive to the port of Amsterdam, in particular—as explained—because most activities in the port of Amsterdam are fossil fuel based. This posed a problem for the Green Party for two reasons. First, the covenant, clearly prohibiting urban expansion towards the west, would soon be signed. Second, the other major political party, Labour Party (PvdA), being the most important political party in Amsterdam for decades, is traditionally more supportive to the port. The tactic chosen by the coalition of the two political parties was therefore not



to exclude research for urban expansion towards the west, but without mentioning the word ‘port’ (PvdA and GL 2006, p. 18):

The possibilities to accelerate the development of current and new development locations will be studied. The study will investigate the opportunity and feasibility for mixed work and living in the western part of the city, south and north of the IJ, within the highway rim. A bikeway connection between North and Westerpark will be included.

However, although the plan of a westward expansion of city redevelopment meant that port areas would disappear, at the same time increasingly new discourses, designs and concepts were launched. For example, a study was carried out called ‘Westwaarts!’ (cf. westward). This was chosen as an antonym for the older (successfully completed) plan ‘Noordwaarts!’ (northward) that was the vision during earlier times, before the expansion of the city to the north bank of the IJ was pursued. This northward expansion redeveloped maritime brown-field areas with architectural icons such as the Eye Film Museum. Here, arguably a very important moment occurred that explains why the conflict between port and city eventually emerged. The ‘traditional’ discourse of ‘port-out-city-in’ (cf. T2 and T3,)—as Amsterdam thus experienced clearly along the IJ banks with the construction of the rail station area and urban development towards the east and along the North IJ banks—was here chosen to back-up the idea of westward expansion, despite the fact that this westward plan, in contrast to the former redevelopment of the IJ banks, was proven to be financially not a good idea.

Nevertheless, the westward expansion, being now arguably a generally established idea, was strategically ‘frozen’. Mayor Eberhard van de Laan (who was a member of the Labour Party) foresaw inevitable problems between port and urban land-uses and proposed a ‘permanent land buffer’ between port and city as a solution until at least 2028. The buffer meant that the east (cf. the city side) of the Minerva port could become a mixed area, but it could not go further to the west. The buffer, however, never became a reality, moreover because, at the same time, the 2006 coalition agreement between Labour Party and Green Party intended to explore the westward expansion of the city.

A key mechanism here was that the Mayor had ordered the port authority to cooperate (cf. project team) and to share strategic information with the city. This was institutionally possible, because the port—although already working more independently—was not yet corporatised. This is an important institutional difference with the other port authorities from comparable port cities in the Netherlands and Belgium. Antwerp corporatised in 1996, Ghent in 1999, Rotterdam in 2004, but Amsterdam only in 2013. Hence, the increasing influence of Green Party on the municipality’s policy during those years, combined with the not yet privatised status of the port authority. These, thus, were the specific contingent conditions under which the causal mechanism, i.e. the not blocking of the westward expansion, could occur.

It is to some degree a paradox that the now quickly emerging plans for the westward urban expansion have become best known as ‘Haven-Stad’. Moreover this name, clearly embedded in the port–city discourse, fits very well in



the strategy to keep protests against these plans as limited as possible. And indeed, Haven-Stad was—and to some extent still is—a plan stating that it aims for a mixed development, without clearly stating what this mix exactly entails (Gemeente Amsterdam 2009):

One is not more important than the other (...) and that is why this exploration is a joint effort between the Port of Amsterdam and the Department for Spatial Planning [cf. wherein port’ affairs were located].

Thus, although the idea of Haven-Stad was gaining momentum again, it remained a financial disaster. The key mechanism here was that the idea be kept alive by connecting the westward expansion to the possibility of hosting the Olympic Games of 2028 in Amsterdam. Without any thorough support or consultation with other stakeholders, the municipality made drawings positioning these new sport stadiums in the Coenhaven, to the west of the Minerva port, as such violating the covenant. These remained only drawings, never thoroughly developed further. And indeed, within the more official plans for the Olympic Games, these locations for the stadiums were not mentioned anymore. The idea was now, however, emphatically in the back of many people’s mind.

In Amsterdam, it has become clear that if a westward urban expansion into the port is to be made possible, even at enormous financial costs, city planners needed to foresee expansion of the existing port area of Amsterdam towards the west. In this regard, the Houtrakpolder plays an important role. The Houtrakpolder is located west of the port of Amsterdam and is still today a green agricultural wetland, located within the Haarlemmermeer municipality. Officially, therefore, Amsterdam cannot decide this on its own. While, thus, in reality, the option of a westward expansion, as a compensation for the urban redevelopment, is not possible within Amsterdam, it has nonetheless helped enormously to further promote the idea and the planning process of Haven-Stad, for, now, complains could be countered by stating that the port would be compensated.

While not solely linked to Amsterdam, another important mechanism is the decreasing ‘believe’ in the economic value of the Dutch ports, for the Netherlands, also known as ‘mainports’. The Mainport policy is a Dutch national policy launched in the 1980s, to invest vast amounts of public money in the growth of the country’s logistical nodes: air- and seaports. This policy was established at the beginning of the accelerating globalisation, and it resulted in an enormous increase of goods and passenger flows. Rotterdam became the biggest port in the world, and today the biggest port of Europe. Schiphol Airport is still among the biggest airports in the world. However, since a decade or so, the Mainport policy has been criticised (RLI 2016). Increasingly, return on (public) investment (RoI) has been questioned, together with declining employment and value-added. The critique found a companion in the municipality of Amsterdam. The urban planning department started to calculate how much more economic value-added and housing could be realised if port areas would be used for urban ‘creative industrial’ land development. Note that creative industry, also labelled as just *industry*, but in a significantly different form than the existing maritime industry, is used to



fill in the industrial part of the mixed land-use of Haven-Stad. The importance of the port in Haven-Stad further declined (van Poelgeest 2018):

At this point, the port lost its natural partner in municipalities' organisation

Besides the Mainport policy, first the believe and subsequently the disbelieve in it, also two other causal mechanisms occurred in Amsterdam that are linked to this policy (Van den Berghe 2020). The first is the changing economic profile of the port (Van den Berghe et al. 2022). As explained, the port of Amsterdam used to be an industrial port. Following, among others, the fire at Marbon and the increasing globalisation and demand for logistics, Amsterdam transformed gradually into a logistical, in particular, fossil fuel, throughput, port. While this came with significant financial returns, the development became, especially during the last decade, increasingly subject to critique. First, the number of jobs decreased strongly and as a consequence the port became a less important reason for the Labour Party to 'fight' for. Second, fossil fuel-based activities have become a target for the growing (influence of the) Green Party in Amsterdam.

Second, there are the investment decisions of the port authority. The port department—and later authority—decided during the 2010s to diversify its activities with the attraction of more cruise ships and container activities. To pursue both objectives, it obtained public finance, for the enlargement of the lock in IJmuiden, with a cost around 1 billion euros. Within the port itself, it established a cruise terminal close to the city centre and a container terminal. Although the latter required around 380 million euros, of which the municipality contributed 280 million euros, the port authority argued that this initial investment was needed to convince commercial parties to invest, and eventually to take over the operating costs. These two decisions, however, backfired. First, the 2008 economic and financial crisis impacted the container sector significantly. The just realised container terminal was almost bankrupt. Second, the increasing numbers of mass tourism in Amsterdam forced the city to limit significantly the number of cruises, making the new cruise terminal obsolete. The overall consequence was that the initial decisions to enlarge the lock in IJmuiden are not currently considered. All this decreased further the importance of the port in Amsterdam, explaining to a large extent the diminishing legacy of the port and the port authority within the municipality of Amsterdam, in comparison with the other main agenda: commercial and residential land-use functions.

3 Discussion and conclusion

This paper started explaining the important difference between generalisation, the process whereby descriptive summaries of a given situation or extrapolations roughly explain or predict what other situations might be like, and abstraction, the process whereby the causal mechanisms and the specific contingent conditions where these occur are analysed. We explained this difference as, relatively recently, this critique has grown within geographical literature research, often confusing process and mechanisms (Yeung 2019a, b), while only a true understanding of the latter can in the end bring us 'decontextualisation' (Hassink 2019). We focussed on



port–city research, often claimed as being a former very important subfield within human geography (Ng and Ducruet 2014). This, because one of the focal points and discussions within this field are port–city (interface) models. We argued that these are well thought-through generalisations and have indeed proved to explain roughly the spatial evolution of many port cities around the world. More recently, Wiegman and Louw (2011) have added a fourth phase to the port–city interface model, namely the spatial conflict. We argued, however, that this phase needs more attention for, now, the port no longer leads the dance (cf. moving towards deeper water access) and the city follows, but the city becomes the main actor. We explained that the port–city research is not yet fully developed. Indeed, it is remarkable that, in the literature, there has been an emphasis on the port actors and governance, and only sporadically, the urban actors were taken into account in explaining the port–city conflict. It is, however, necessary to take into account ‘other’ economic processes (beyond transport or logistics), social forces and politics, and the way they all influence the development of the city–port interface.

Subsequently, we turned to the (growing) literature that focuses on process and mechanisms, and introduced the work of Sayer (2000), explaining the difference between structure and effect (cf. the beginning and ending points of the process) and the causal mechanisms connecting these two. We combined this with the port–city interface model of Wiegman and Louw (2011), leading to our analytical framework.

In our empirical results, we first explained the important structure/effect, or in other words, the different phases (T1–T4) and subsequently highlighted the important causal mechanisms, by performing qualitative document research and interviews. Our results showed that the port–city conflict is all but a ‘logical’ process. The conflict in Amsterdam is very specific and emerged out of context-dependent causal mechanisms that made the former ‘symbiosis’ turn into a conflict. The key causal mechanism was the failure of the municipality to establish a ‘permanent land buffer’ between port and city, spatially and institutionally. From that moment, the idea of Haven-Stad never disappeared, explaining why, eventually, the idea today has become too big to fail. In other words, the plan today is arguably beyond any logic, particularly from a land-use economics perspective often referred to in the port city literature.

In this paper, we have shown that the port–city conflict in Amsterdam is the result of a path-dependent process of colliding discourses, political agendas, (dis)use of economic and financial data and sectoral policies. Illustrative for the ‘too big to fail’ land-use conflict is the recent announcement that an extension of Amsterdam’s subway is needed to make Haven-Stad a success (Gemeente Amsterdam 2021), thus requiring even more public investments. Similar to the three scenarios, this has in turn also been strongly criticised by the Netherlands Bureau for Economic Policy Analysis for its high costs (Koops and Kruyswijk 2021). Whatever the outcome, the point we are making is that financial-economic land-use explanations often associated with the ‘port-out-city-in’ model are insufficient for explaining the events around Haven-Stad Amsterdam.

To conclude, we return to our research question. Is the port–city interface conflict an observation or part of a self-fulfilling prophecy? We argue that, at least in



Amsterdam, it is mostly the latter. What is apparent from our results is the increasing frames of ‘us’ and the ‘other’, or the ‘port’ and ‘city’. Municipal departments in charge of port planning were eager to be corporatised and become (semi-)independent entities, along with many similar public port authorities in the Western world. Globalisation and the increasing demand for logistics led ports to become infrastructure landlords. And indeed, the financial-economic returns for the port have been significant.

But there is also a cost. The port of Amsterdam, in one way or another similar in other ports (Van den Berghe et al. 2022), changed its economic profile from a more industrial cluster with a high(er) number of jobs, to a logistical port with far less employment. As a consequence, we have shown that the Labour Party, being the main ‘defender’ of the port, lost its constituent interest in the port. And following the ‘choice’ for fossil fuels in Amsterdam, the upcoming Green Party objected to the presence of these activities and land-uses within the municipality. In our results, we have reconstructed how this ‘port versus city’ discourse gradually grew. In combination with the ‘wrong bets’ of the port authority on containers and cruise ships just prior to the crisis of 2008, this explains how the Haven-Stad redevelopment has now become too big to fail. Thus, to answer our research question, the observed port–city interface conflict is a correct observation and generalisation. However, the abstraction teaches us that it is also very specific, and that the observations or ‘port’ and ‘city’ in former port city models, before they were institutionalised, are maybe the true start of the self-fulfilling prophecy of port versus city in Amsterdam. Putting it differently, the port-out, city-in model in Amsterdam has been used as a strategy.

In this paper, we explained that researchers in other port cities have described similar processes and causal mechanisms around land-use planning and decisions. Relative to Amsterdam, the situation in other port city waterfronts seems to be less polarised. Although its underlying mechanisms are persistent, it is unclear whether the ‘port-out, city-in’ model can be labelled as a ‘universal truth’. To what extent, in other words, it can be decontextualised is subject to further research.

References

- Barnes, T.J., and B. Christophers. 2018. *Economic geography: A critical introduction*. New York: Wiley.
- Bartomiejski, Robert. 2016. Environmental conflicts in port cities. *Opuscula Sociologica* 18 (4): 33–44.
- Bird, J. 1963. *The major seaports of the United Kingdom*. London: Hutchinson.
- Boeve, Marlon. 2017. Het omgevingsrecht van de compacte stad: Het omgevingsrechtelijk instrumentarium voor verdichting en functiemenging in het stedelijk gebied. PhD, Faculty of Law, University of Amsterdam.
- Carasso-Kok, M., W. Frijhoff, N. Huizinga, E. Wouthuysen, W. Krook, and P. de Rooy. 2004. *Geschiedenis van Amsterdam*. Amsterdam: SUN.
- Daamen, Tom A., and Isabelle Vries. 2013. Governing the European port–city interface: Institutional impacts on spatial projects between city and port. *Journal of Transport Geography* 27: 4–13. <https://doi.org/10.1016/j.jtrangeo.2012.03.013>.
- Ducruet, César, Sylvain Cuyala, and Ali El Hosni. 2018. Maritime networks as systems of cities: The long-term interdependencies between global shipping flows and urban development (1890–2010). *Journal of Transport Geography* 66: 340–355. <https://doi.org/10.1016/j.jtrangeo.2017.10.019>.



- Ferraro, Fabrizio, Jeffrey Pfeffer, and Robert I. Sutton. 2005. Economics language and assumptions: How theories can become self-fulfilling. *Academy of Management Review* 30 (1): 8–24. <https://doi.org/10.5465/amr.2005.15281412>.
- Gemeente Amsterdam. 2006. Coallitieakkoord gemeente Amsterdam.
- Gemeente Amsterdam. 2009. Haven-Stad: 3 vergezichten.
- Gemeente Amsterdam. 2011. Structuurvisie Amsterdam 2040.
- Gemeente Amsterdam. 2017. Ontwikkelstrategie Haven-Stad.
- Gemeente Amsterdam. 2021. Haven-Stad: veranderen van gebied. <https://www.amsterdam.nl/projecten/haven-stad/>.
- Giddens, Anthony. 1984. *The constitution of society: Outline of the theory of structuration*. Cambridge: Polity Press.
- Gong, Huiwen, and Robert Hassink. 2020. Context sensitivity and economic-geographic (re)theorising. *Cambridge Journal of Regions, Economy and Society*. <https://doi.org/10.1093/cjres/rsaa021>.
- Gosman, J.G. 2015. *Politiek Compendium*. Leiden: Leiden University.
- Hall, Peter, and Wouter Jacobs. 2012. Why are maritime ports (still) urban, and why should policy-makers care? *Maritime Policy & Management* 39 (2): 189–206. <https://doi.org/10.1080/03088339.2011.650721>.
- Hassink, Robert. 2019. How to decontextualize in economic geography? *Dialogues in Human Geography* 9 (3): 279–282. <https://doi.org/10.1177/2043820619875359>.
- Hayuth, Yehuda. 1982. The port-urban interface—An area in transition. *Area* 14 (3): 219–224.
- Hein, Carola. 2013. Port cities. In *The Oxford handbook of cities in world history*, ed. Peter Clark, 809–827. Oxford: Oxford University Press.
- Hein, Carola. 2021. Port city porosity: Boundaries, flows, and territories. *Urban Planning* 6 (3): 1–9. <https://doi.org/10.17645/up.v6i3.4663>.
- Hesse, Markus. 2013. Cities and flows: Re-asserting a relationship as fundamental as it is delicate. *Journal of Transport Geography* 29: 33–42. <https://doi.org/10.1016/j.jtrangeo.2012.12.014>.
- Hesse, Markus. 2017. Approaching the relational nature of the Port-City Interface in Europe: Ties and tensions between seaports and the urban. *Tijdschrift Voor Economische En Sociale Geografie*. <https://doi.org/10.1111/tesg.12282>.
- Hoppenbrouwer, Eric, and Erik Louw. 2005. Mixed-use development: Theory and practice in Amsterdam’s Eastern Docklands. *European Planning Studies* 13 (7): 967–983. <https://doi.org/10.1080/09654310500242048>.
- Hoyle, Brian. 1968. East African Seaports: An application of the concept of “Anyport.” *Transactions of the Institute of British Geographers* 44: 163–183. <https://doi.org/10.2307/621755>.
- Hoyle, Brian. 1989. The Port City Interface—Trends, problems and examples. *Geoforum* 20 (4): 429–435. [https://doi.org/10.1016/0016-7185\(89\)90026-2](https://doi.org/10.1016/0016-7185(89)90026-2).
- Hoyle, Brian. 2000. Global and local change on the port-city waterfront. *Geographical Review* 90 (3): 395–417. <https://doi.org/10.1111/j.1931-0846.2000.tb00344.x>.
- Jones, Martin. 2009. Phase space: Geography, relational thinking, and beyond. *Progress in Human Geography* 33 (4): 487–506. <https://doi.org/10.1177/0309132508101599>.
- Kahn, Dennis, and Gerrit van der Plas. 1999. Amsterdam. *Cities* 16 (5): 371–381. [https://doi.org/10.1016/S0264-2751\(99\)00019-0](https://doi.org/10.1016/S0264-2751(99)00019-0).
- Koops, Ruben, and Marc Kruyswijk. 2021. CPB maakt gehakt van plan doortrekken Noord/Zuidlijn. *Het Parool*, 27/05/2021.
- Martin, Ron, and Peter Sunley. 2015. Towards a developmental turn in evolutionary economic geography? *Regional Studies* 49 (5): 712–732. <https://doi.org/10.1080/00343404.2014.899431>.
- Massey, Doreen. 1979. In what sense a regional problem? *Regional Studies* 13 (2): 233–243. <https://doi.org/10.1080/09595237900185191>.
- Massey, Doreen. 1984. *Spatial divisions of labour*. London: Mac Hillan.
- McCalla, Robert J. 1983. Separation and specialization of land-uses in cityport waterfronts: The cases of Saint John and Halifax. *The Canadian Geographer / Le Géographe Canadien* 27 (1): 48–61. <https://doi.org/10.1111/j.1541-0064.1983.tb00680.x>.
- Merckx, Filip, Theo Notteboom, and Willy Winkelmans. 2003. Spatial models of waterfront redevelopment: the tension between city and port revisited. IAME (International Association of Maritime Economists) Annual Conference, Busan, Korea Maritime University, 3–5 September.
- Merton, Robert K. 1948. The self-fulfilling prophecy. *The Antioch Review* 8 (2): 193–210. <https://doi.org/10.2307/4609267>.



- Moretti, Beatrice, Susanne Komossa, Nicola Marzot, and Carmela Andriani. 2019. States of co-existence and border projects in port cities: Genoa and Rotterdam compared. *Proceedings of the Institution of Civil Engineers - Urban Design and Planning* 172 (5): 191–202. <https://doi.org/10.1680/jurdp.18.00037>.
- Musterd, Sako. 2006. Segregation, urban space and the resurgent city. *Urban Studies* 43 (8): 1325–1340. <https://doi.org/10.1080/00420980600776418>.
- Ng, Adolf K. Y., and César. Ducruet. 2014. The changing tides of port geography (1950–2012). *Progress in Human Geography*. <https://doi.org/10.1177/0309132513516178>.
- Ng, Adolf K. Y., César. Ducruet, Wouter Jacobs, Jason Monios, Theo Notteboom, Jean-Paul. Rodrigue, Brian Slack, Ka.-chai Tam, and Gordon Wilmsmeier. 2014. Port geography at the crossroads with human geography: Between flows and spaces. *Journal of Transport Geography* 41: 84–96. <https://doi.org/10.1016/j.jtrangeo.2014.08.012>.
- Norcliffe, Glen, Keith Bassett, and Tony Hoare. 1996. The emergence of postmodernism on the urban waterfront. *Journal of Transport Geography* 4 (2): 123–134. [https://doi.org/10.1016/0966-6923\(96\)00005-1](https://doi.org/10.1016/0966-6923(96)00005-1).
- Olivier, D., and B. Slack. 2006. Rethinking the port. *Environment and Planning A* 38 (8): 1409–1427. <https://doi.org/10.1068/A37421>.
- Pliakis, Filip. 2019. 'A New City in the Port'. An actor-centered institutional analysis of the strategic governance and planning process around Amsterdam Haven-Stad. Master, Management in the Built Environment, Delft University of Technology.
- Pratt, Andy. 2009. Critical realism/critical realist geographies. In *International encyclopedia of human geography*, ed. R. Kitchin and N. Thrift, 922–927. Amsterdam: Elsevier.
- Province of North Holland. 2003. Rapport omtrent structuurvisie Amsterdam.
- Province of North Holland. 2008. Convenant Houthavens/NSDM-werf.
- PvdA, and GL. 2006. Coalitieakkoord PvdA en GroenLinks Amsterdam.
- RLI. 2016. Mainports voorbij. Raad voor de Leefomgeving en Infrastructuur.
- Robinson, Ross. 1985. Industrial strategies and port development in developing countries: The Asian case. *Tijdschrift Voor Economische En Sociale Geografie* 76 (2): 133–143.
- Rodríguez-Pose, Andrés. 2011. Economists as geographers and geographers as something else: On the changing conception of distance in geography and economics. *Journal of Economic Geography* 11 (2): 347–356.
- Sayer, Andrew. 1997. Critical Realism and the Limits to Critical Social Science. *Journal for the Theory of Social Behaviour* 27 (4): 473–488. <https://doi.org/10.1111/1468-5914.00052>.
- Sayer, Andrew. 2000. *Realism and social science*. London: Sage.
- Sunley, Peter. 2008. Relational economic geography: A partial understanding or a New Paradigm? *Economic Geography* 84 (1): 1–26. <https://doi.org/10.1111/j.1944-8287.2008.tb00389.x>.
- Van den Berghe, Karel. 2018. Planning the Port City. A contribution to and application of the relational approach, based on five case studies in Amsterdam (The Netherlands) and Ghent (Belgium). PhD, Civil Engineering, Ghent University.
- Van den Berghe, Karel. 2020. Stad en haven in conflict: een Dutch Disease in wording? *Gebiedsontwikkeling.nu*, 13/05/2020.
- Van den Berghe, Karel, and Tom Daamen. 2020. From planning the Port/City to planning the Port-City: Exploring the economic interface in European Port Cities. In *European Port Cities in transition. Moving towards more sustainable sea transport hubs*, ed. Angela Carpenter and Rodrigo Lozano. Berlin: Springer.
- Van den Berghe, Karel, Wouter Jacobs, and Luuk Boelens. 2018. The relational geometry of the port-city interface: Case studies of Amsterdam, the Netherlands, and Ghent, Belgium. *Journal of Transport Geography* 70 (C): 55–63. <https://doi.org/10.1016/j.jtrangeo.2018.05.013>.
- Van der Berghe, Karel, Antoine Peris, Evert Meijers, and Wouter Jacobs. 2022. Friends with benefits: the emergence of the Amsterdam–Rotterdam–Antwerp (ARA) polycentric port region. *Territory, Politics, Governance*. <https://doi.org/10.1080/21622671.2021.2014353>.
- van Poelgeest, Maarten. 2018. Personal interview. edited by Filip Pliakis.
- Verhoeven, Patrick. 2010. A review of port authority functions: Towards a renaissance? *Maritime Policy & Management* 37 (3): 247–270. <https://doi.org/10.1080/03088831003700645>.
- Wiegman, Bart W., and Erik Louw. 2011. Changing port–city relations at Amsterdam: A new phase at the interface? *Journal of Transport Geography* 19 (4): 575–583. <https://doi.org/10.1016/j.jtrangeo.2010.06.007>.



- Willink, Bastiaan. 1998. *De tweede Gouden Eeuw. Nederland en de Nobelprijzen voor natuurwetenschappen 1870–1940*. Amsterdam: dbnl.
- Yeung, Henry Wai-chung. 1997. Critical realism and realist research in human geography: A method or a philosophy in search of a method? *Progress in Human Geography* 21 (1): 51–74. <https://doi.org/10.1191/030913297668207944>.
- Yeung, Henry Wai-chung. 2019a. Rethinking mechanism and process in the geographical analysis of uneven development. *Dialogues in Human Geography* 9 (3): 226–255. <https://doi.org/10.1177/2043820619861861>.
- Yeung, Henry Wai-chung. 2019b. What kind of theory for what kind of human geography? *Dialogues in Human Geography*. <https://doi.org/10.1177/2043820619875361>.

Publisher's Note Springer Nature remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.

