Published in: ARCH+ "Legislating Architecture," English Version, ISBN 978-3-931435-34-9, Release: May 2016

LEGISLATION OF THE SEA: **Spatializing a New Urban Realm**

Nancy Couling

© Wikimedia

The Roman Empire in 116 AD, encircling a *mare nostrum*

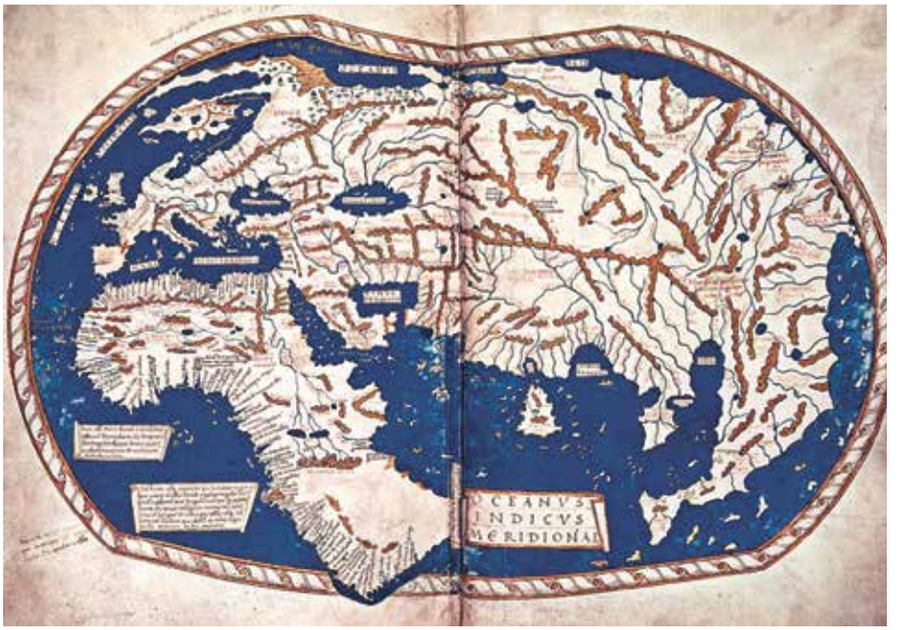
INTRODUCTION

The most influential territorial initiative of the twentieth century didn't establish a comprehensive legal basis for space on land, but rather at *sea*. When the United Nations Convention on the Law of the Sea (UNCLOS) came into force in 1994, after being developed from 1958 to 1982, it established a new type of territory of vast proportions.[1] Moreover, this initiative became the first fundamental legal territorial concept to operate on an international scale.[2]

Legislation to govern the sea was developed to resolve disputes and spatial claims that had begun to mount after World War II. Despite the intensification of ocean-bound activities and a vested interest among nations in maintaining undersea resource-zones, notions of ocean space as a fluid territorial zone had traditionally functioned to prioritize movement, maintain flows of trade, and resist territorial claims. The Convention on the Law of the Sea, however, applied instruments of *fixed territorialization* to a realm characterized by intensifying processes of urbanization and to bodies of water that are, by nature, periodic, contingent masses in continual flux. The dimensions of the ocean are global; for this reason, both the urban and ecological systems at work here operate on a planetary scale.

From a legislative perspective, diverse and contradictory conceptualizations of ocean space have prevailed throughout history. These models have traditionally differed from models of territorial domination based on the exercise of power, the "political technology" seen most often on land. Ocean space, historically speaking, was seen not exclusively as something defensible or mappable, but also as a common resource, too vast and powerful to completely control. Using the example of the planning of the Exclusive Economic Zone in the German North Sea, this essay discusses legislative attempts to manage the urbanization of the ocean—a paradigm shift toward the *ocean as a project*.

Published in: ARCH+ "Legislating Architecture," English Version, ISBN 978-3-931435-34-9, Release: May 2016



World map by Henricus Marcelius 1489, depicting the enclosed Norwegian Sea as a *mare clausum* (top left)

As the ocean reveals itself to be a highly urbanized entity, an understanding of complex ocean systems could enrich and inform our understanding of urban systems that, because of their fluid character, call for an alternative conception of design—a conception in which the urban system, just like the ocean itself, can be regarded as an active agent, and the global public as the stewards of this "commons."

OCEAN SPACE

In Western civilizations, man's interaction with the sea is attended by his instruments of measurement and control, both of which serve as a prerequisite to planning any maritime endeavor. According to Lefebvre, humans are intrinsically spatial beings, continuously engaged in the collective activity of producing spaces and places.[3] The act of formalizing these spaces into legally bounded units is a political act, carried out either through negotiation or the exercise of power. The history of the formalization of ocean space into legal categories, therefore, is as long as the history of negotiation and political power itself. Historically speaking, alliances and rivalries between tribes, political units, or confederations at sea have been fluid and dynamic, comparable to the situation that prevailed on land before the rise of the nation-state.

MARE NOSTRUM

Under the Roman Empire, the phrase *mare nostrum*—Latin for "our sea"—referred to the entire Mediterranean. The death of Cleopatra in 31 BC marked the fall of Egypt under Roman control, closing the empire's ring of political power around the whole of the Mediterranean—a situation maintained by the Romans until around AD 200. But despite the fact that the Romans' use of this phrase served to claim the sea as their own, modern legal research has concluded that, in practice, the Roman approach to commanding this space was closer to the principles of stewardship.[4] The Mediterranean under the Roman Empire was a non-possessable space, but a space within which power could be mobilized and asserted in the interests of managing or stewarding its bounty. The Romans claimed *imperium* (the right to command) but not *dominium* (the right to own).

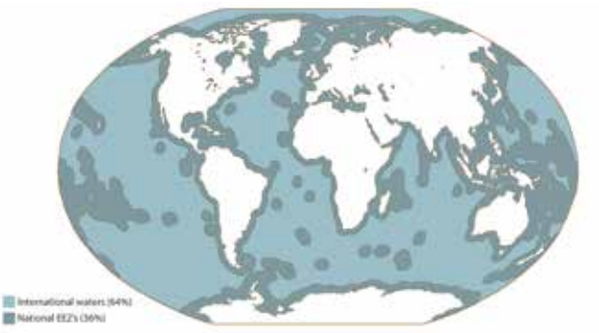
MARE CLAUSUM

Mare clausum—the "closed sea"—has been a concept applied by different regimes in specific periods before it became a subject of fundamental and historical debate. One example is the northern sea—*mare septentrionalis*—presided over from the tenth through thirteenth centuries AD by Norwegian kings, who tried to prevent foreign ships from entering and trading.[5] At the time, however, it was envisaged that this sea, which today encompasses the Greenland Sea and northern reaches of the Norwegian Sea, was entirely surrounded by the Norwegian-ruled lands of Greenland and Iceland, and was therefore a type of internal sea.[6] Norwegian kings arranged special treaties with Great Britain and the Netherlands in response to their requests to conduct whaling expeditions around Svalbard.

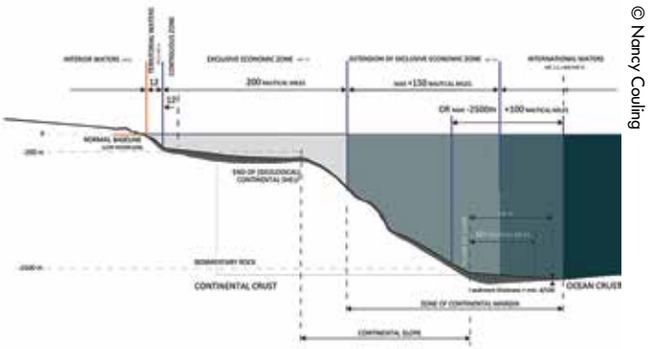
The Baltic Sea also became a *mare clausum* from the sixteenth to seventeenth centuries, when Danish-Norwegian kings exercised control over its three entrances: the Oresund, the Great Belt, and the Little Belt. During the eighteenth century, unilateral control gave way to a *mare clausum* in the form of a cooperative arrangement between states surrounding the Baltic Sea—Sweden, Russia, and Denmark, and independent German states—aimed at maintaining peace and protecting the neutrality of the Baltic region. This arrangement proved effective so long as the ambitions of the states involved were aligned, and no one country was conducting military activities against another—which became the case when Russia invaded Sweden in 1809.

MARE LIBERUM

In 1609, the Dutch jurist and philosopher Hugo Grotius published his influential book *Mare Liberum*. The book was a response to international discussions on the rights to passage at sea, in particular the famous papal bull of 1493 (which resulted in the 1494 Treaty of Tordesillas) that divided the globe into two equal halves, one for Spain and one for Portugal, in the wake of Spanish and Portuguese expeditions to undiscovered continents. Grotius argued for the freedom of the seas in the general interests of all mankind—arguing that seas should serve the mutual benefit of everyone. It was a position that also served the interests of the Dutch Republic, which was increasingly establishing maritime dominance and had expanded its commercial trading interests into India, which belonged to Portugal's *mare clausum* according to the papal bull.



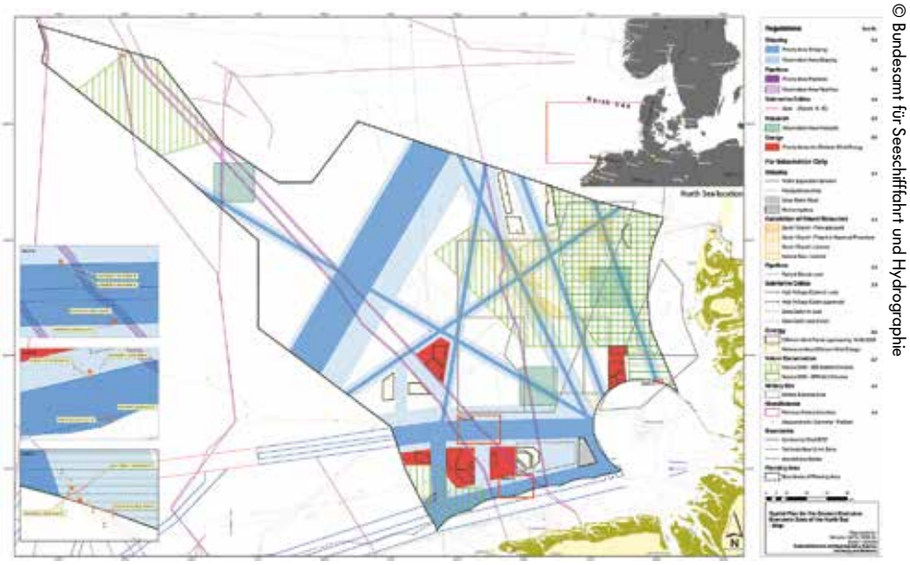
Ocean zones defined by UNCLOS 1982



Division of ocean space into international EEZs (36%) and international waters (64%) according to UNCLOS

Published in: ARCH+ "Legislating Architecture," English Version, ISBN 978-3-931435-34-9, Release: May 2016

Designing Boundaries



Spatial Plan for the German Exclusive Economic Zone of the North Sea. Bundesamt für Seeschifffahrt und Hydrographie (BSH) 2009

Seen as having economic benefit for everyone, the concept of *mare liberum* began to take a firm hold. It was, however, implicitly understood that nations should have jurisdiction over the territorial seas close to their own shores, and that other maritime nations could expect a certain amount of protection from pirates and other attackers within this zone. In the early 1700s, the Dutch formalized this idea, by issuing a decree to establish a "territorial sea" as wide as the hypothetical range of an imaginary cannon. The distance of three nautical miles came to be widely accepted as the width of the territorial sea—implying, by definition, that the territorial sea was a zone to be militarily defended.

UNITED NATIONS CONVENTION ON THE LAW OF THE SEA

Until the mid-twentieth century, the doctrines of "freedom of the seas" and the territorial sea had generally seen wide acceptance. However, increasing conflict at sea, threats from pollution, the need to regulate the expanding maritime shipping trade, and competing claims to territories further offshore led the United Nations to initiate the drafting of a comprehensive legal framework for ocean space. The Third United Nations Conference on the Law of the Sea, which was convened in 1973 and finished in 1982 with the final draft of UNCLOS, defined a national Exclusive Economic Zone (EEZ) as extending to a distance of 200 nautical miles (nm) offshore; the new convention also included regulations for the use of this zone.[7] Coastal nations were thus awarded the right of jurisdiction over resources within the boundaries of their continental shelf, represented by the 200 nm limit. In cases where the continental crust itself is deemed to extend geologically beyond 200 nm, the EEZ can also be extended using a series of calculations pertaining to this crust. UNCLOS defined two further zones: a territorial sea, reaching 12 nautical miles offshore, over which the country has all rights of governance; and the next contiguous zone, comprising a further 12 nautical miles, within which police authorities can act to enforce the law or to prevent its violation.

Under this law, it is estimated that 36 percent of the world's ocean space is brought within the borders of national EEZs, versus the 64 percent remaining as "high seas"—a zone free of legal restrictions. Considered in the light of the historical overview above, the development of the EEZ as a legal entity marks the reemergence of the *mare clausum*, and a restriction of the principle of *mare liberum*. While territorial claims in the ocean have a long history of oscillating between the poles of *mare clausum* and *mare liberum*, the unprecedented degree of strategic planning needed for this space has resulted in the emergence of a new field.[8]

SPATIAL PLAN FOR THE GERMAN NORTH SEA

Spurred on by the potential of offshore wind, Germany was quick to introduce national legislation for the sea in the Federal Spatial Planning Act of 2004. Feed-in tariffs for wind power had made this sector attractive for investors,[9] and Germany's EEZ was earmarked as one possible solution for meeting the country's ambitious renewable energy targets—for Germany to achieve 30 percent renewable energy production by 2020.[10] These targets were further specified to advance offshore wind in the 2008 National Strategy for the Seas, in which offshore production of 20,000–25,000 megawatts by 2025–2030 was seen as a "realistic" objective, amounting to 15 percent of the total electricity consumption in 2008.[11] These incentives led to planning authorities receiving a flood of applications to install offshore wind turbines, and, subsequently, legislative spatial plans for the German EEZ in the Baltic and North Seas were released in 2009.[12]

The spatial plan for the North Sea establishes zones and corridors according to economic priorities. First, the plans work to secure existing shipping routes; then, within the latticework of maritime transport routes that results, the residual spaces become priority areas for the production of offshore wind energy. Valuable environmental areas, identified according to the criteria set out in Natura 2000,[13] are indicated in the plan for information purposes only, as they are not yet protected by national legislation. However, various economically productive spaces overlay these Natura areas—spaces for dredging activities, cables and pipelines, and military exercise zones.

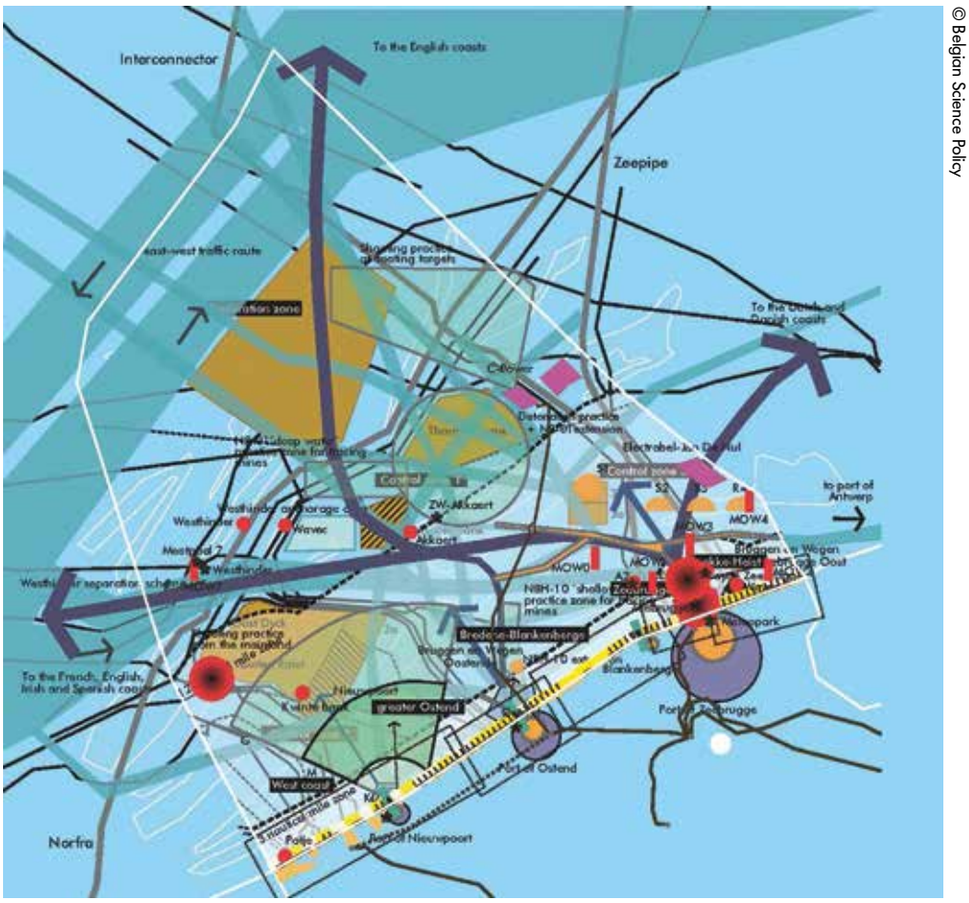
THE URBANIZATION OF THE OCEAN

The spatial plan reveals, quite starkly, the extent of the urbanization processes unfolding in the North Sea. Production activities and energy and communication installations occupy different surfaces, linking up with their respective networks. Urban systems are extended through and across the space in a dense web that reaches throughout the North Sea and beyond. Since the spatial plan was drawn up, the area covered by permit applications for windpark development has increased exponentially. The sea depicted in these plans is a technical and logistical sea, designed to produce and distribute energy and goods to adjacent urban communities, which, in turn, are dependent on what Brenner and Schmid call "operational landscapes" outside of metropolitan areas.[14] The North Sea is clearly one such landscape, with strategic importance in the production of fossil fuels and renewable energy, providing a vital link in the porous, unevenly distributed formation of *planetary urbanization*.[15]

However, the legislative plan only presents a restricted, superficial view of ocean space, which mobilizes ordering mechanisms typically associated with earthbound space. If ocean space can be said to increasingly fall under static systems of control and jurisdiction, a fundamental contradiction becomes evident; oceans are complex integrated systems that dictate the world's climate, store its carbon, and provide 95 percent of the space for biological life on earth. They are dynamic bodies, mul-

1 See the *United Nations Convention on the Law of the Sea*, December 10, 1982, available at http://www.un.org/Depts/los/convention_agreements/ convention_overview_convention.htm.
2 See Bo Johnson Theutenberg, "Mare Clausum et Mare Liberum," *ARCTIC* 37, no. 4 (December 1984), 481–492. Available at http://pubs.aina.ucalgary.ca/arctic/Arctic37-4-481.pdf.
3 See Henri Lefebvre, *The Production of Space*, trans. Donald Nicholson-Smith (Oxford: Blackwell Publishers, 1991).
4 See Philip E. Steinberg, *The Social Construction of the Ocean*, Cambridge Studies in International Relations 78 (Cambridge: Cambridge University Press, 2001).
5 See Ulla Ehrensvärd, Pellervo Kokkonen, and Juha Nurminen, *Die Ostsee: 2000 Jahre Seefahrt, Handel und Kultur* (Hamburg: National Geographic, 2010).
6 See Theutenberg, "Mare Clausum et Mare Liberum."
7 See *United Nations Convention on the Law of the Sea*.
8 Marine Spatial Planning is an initiative supported by UNESCO. For more on the subject, see http://www.unesco-ioc-marinesp.be/.
9 Guaranteed subsidies for electricity generated by wind-power were introduced in Germany in 1990.
10 See http://www.bmub.bund.de/themen/klima-energie/klimaschutz/klima-klimaschutzdownload/artikel/das-integrierte-energie-und-klimaschutzprogramm-iekp/?tx_ttnews[backPid]=3033.
11 See www.clearingstelle-eeg.de/files/private/active/0/bundesregierung_meeresstrategie_2008.pdf. The 2014 Renewable Energy Act upgraded the objectives, stipulating that 80% of Germany's

Published in: ARCH+ "Legislating Architecture," English Version, ISBN 978-3-931435-34-9, Release: May 2016



Mare Liberum: Superimposed projection of all users of the BPNS (Belgian Part of the North Sea). From Frank Maes, "A Flood of Space, Towards a Spatial Structure Plan for Sustainable Management of the North Sea," UGent Maritime Institute, 2005

energy consumption should come from renewables by 2050. Available at http://www.gesetze-im-internet.de/eeg_2014/__1.html.

12 Federal Maritime and Hydrographic Agency of Germany, "Marine Spatial Plan for the Exclusive Economic Zone of the Baltic Sea," December 2009. Available at http://www.bsh.de/en/Marine_uses/Spatial_Planning_in_the_German_EEZ/documents2/Spatial_Plan_Baltic_Sea.pdf.

13 Natura 2000 lays out a network of nature protection areas for the territory of the EU, divided into SAC (Special Areas of Conservation), designated under the Habitats Directive, and SPA (Special Protected Areas), designated under the Birds Directive.

14 See Neil Brenner, *Implosions / Explosions: Towards a Study of Planetary Urbanization* (Berlin: Jovis, 2014).

15 See Neil Brenner and Christian Schmid, "Planetary Urbanization," in *Urban Constellations*, edited by Matthew Gandy (Berlin: Jovis, 2011).

16 See Frank Maes, "A Flood of Space. Towards a Spatial Structure Plan of the Sustainable Managemet of the North Sea," GAUFRE report (Bernheem: Belgian Science Policy, 2005). Available at http://www.belspo.be/belspo/organisation/publ/pub_ostc/MA/GaufreZVR_en.pdf.

17 James Corner, "The Agency of Mapping: Speculation, Critique and Invention," in *Mappings*, edited by Denis Cosgrove (London: Reaktion Books, 1999), 216.

18 Paola Viganò, *Les territoires de l'urbanisme: le projet comme producteur de connaissance* (Geneva: Mētis Presses, 2014), 23. Author's own translation.

19 Ibid.

ti-directional environments, and ecologic temporalities. Their flows and currents do not respect borders. Therefore, imposing or overlaying legislative boundaries here creates unique and potentially more asymmetrical problems than on land. At the same time, extending urban systems into ocean space brings this space into the realms for which architecture is actively concerned and responsible.

This contradiction calls for an alternative approach to *designing* legislation. When responding to the reality of urbanization extending into ocean space, the architectural challenge consists in redrawing boundaries according to the dynamics of the ocean. And as the ocean reveals itself to be a highly urbanized entity, could the reverse also be true—can an understanding of complex ocean systems enrich and inform our understanding of urban systems?

A FLOOD OF SPACE

The Belgian North Sea study "A Flood of Space" exemplifies an alternative process for establishing a legislative plan.[16] This document outlined the extensive range of uses and spatial claims in a restricted area of 3,600 square km in the Belgian North Sea, also providing a range of strategic scenarios to be used as a basis for developing a single vision of how to legislate the sea. The scenarios were: the *relaxed* sea, the *playful* sea, the *natural* sea, the *mobile* sea, the *rich* sea, and the *sailing* sea. In addition to describing economic and spatial demands that humans place on the sea, these scenarios aim to lend a visionary, imaginative character to the space of the sea itself. Tools of design are utilized to describe potential dimensions of this sea space, serving as a call for reflection and participation, and to consciously forge a new direction in "constructing" the future sea. The potential of the act of mapping is harnessed to visualize unknown aspects of ocean territory and to "stage the conditions for the emergence of new realities."[17] Throughout all this, the objective is to inform later legislative procedures.

CONCLUSION

At their roots, architecture and urban design are conceptual disciplines. And above all, the shifting status of the ocean, as it becomes an increasingly urbanized realm, requires an enriched *conceptual* basis to embrace the periodic nature and differentiated spatial reality of the ocean alongside its (quantitative) economic contribution. On such a basis, it will be possible to initiate the process of articulating identities and desired spatial properties, while at the same time nourishing the process of molding, of *designing* legislation.

The development of a rich conceptual basis is crucial to any hope for future oceans being constructed in a democratic, heterogeneous fashion. Urban design as a discipline already faces what Paola Viganò describes as a "new and immense effort of imagination and of conception."[18] Not only a technical, scientific dimension, but an *interpretive* dimension is required to release the inherent creative potential of space and to adjust the character of legislation to its physical properties. Viganò also argues that through conceptualization, description, and conjectures about the future, the territorial project can serve to produce knowledge.[19]

Ocean space is a commons. Adding the dimension of *design* will therefore serve as a necessary and crucial complement to the established legislative frameworks in the effort to establish ocean space as a communal territorial project. The spatial scale of the ocean commons requires global governance; yet, at the same time, this domain is defined by the very absence of a superordinate authority. Precisely here is where the current design challenge lies for legislating architecture.