

Research



Cite this article: Peters K. 2020 *The territories of governance: unpacking the ontologies and geophilosophies of fixed to flexible ocean management, and beyond*. *Phil. Trans. R. Soc. B* **375**: 20190458.
<http://dx.doi.org/10.1098/rstb.2019.0458>

Accepted: 3 July 2020

One contribution of 17 to a theme issue 'Integrative research perspectives on marine conservation'.

Subject Areas:

environmental science

Keywords:

ocean governance, management, territory, ontologies, geophilosophies

Author for correspondence:

Kimberley Peters

e-mail: kimberley.peters@hifmb.de

The territories of governance: unpacking the ontologies and geophilosophies of fixed to flexible ocean management, and beyond

Kimberley Peters^{1,2,3}

¹Alfred-Wegener-Institut Helmholtz-Zentrum für Polar- und Meeresforschung, Am Handelshafen 12, 27570 Bremerhaven, Germany

²Helmholtz Institute for Functional Marine Biodiversity at the University of Oldenburg (HIFMB), Ammerländer Heerstrasse 231, 26129 Oldenburg, Germany

³Institute for Chemistry and Biology of Marine Environments [ICBM], University Oldenburg, Carl-von-Ossietzky-Straße 9-11, 26133 Oldenburg, Germany

KP, 0000-0001-7297-6334

This paper offers a conceptual contribution to understanding ocean governance and the management of spaces for the protection of marine biodiversity, organization of extractive industries, the arrangement of global shipping and other 'blue-economy' uses. Rather than focus on one type of management technique (such as a Marine Protected Area (MPA) or example of Marine Spatial Planning), or a site- or species-specific case study of governance, this paper offers a *theoretical* tracking of the uncharted territories of governance that foreground ocean management approaches. The literature on ocean governance and management techniques predominantly derive from scientific disciplines (which provide the basis for planning) and policy-related social science fields, leaving a lacuna in more critical discussions of ways of knowing and understanding the world that drive it. The paper argues the need to critically understand the ontologies (the regimes of what we believe exists) and geophilosophies (the geographically informed modes of thinking) of territory that underscore ocean management to make sense of its past successes and failures, its present functioning and its future directions. This paper argues that without critical consideration of the kinds of thinking—the ontologies and geophilosophies—that drive ocean management, it will lack the transformative potential many hope it will achieve for sustainable development.

This article is part of the theme issue 'Integrative research perspectives on marine conservation'.

Abstract philosophizing may strike you as irritating, distracting you from the main task in hand... Why on earth must you bother with philosophy? The short answer is that you cannot avoid it, whether you like it or not! ([1], p. 8)

1. Introducing territories of governance, and governance territories in ocean management

Zones, areas, sectors. Borders, boundaries, limits. This, quite often, is the language deployed in relation to ocean governance, and manifested in management tools and policy directives for marine environments. Governance refers to a process of deciding, managing, controlling and organizing a set of activities, practices, people, resources and spaces. It refers to an 'art or practice of governing' ([2], p. 317) that is not wholly top-down but rather involves 'a wide range of actors in the production of policy outcomes, including NGOs, private companies, pressure groups and social movements as well as those state institutions

traditionally regarded as part of government' ([2], p. 317). By its very nature then, governance is complex. It 'reflects the dramatic intensification of societal [and environmental] complexity which flows from growing functional differentiations of institutional orders within a global world' ([3], p. 111). In other words, our world is complex, so governance should reflect that complexity. However, in the case of the seas and oceans, the tools and directives often deployed in governance take a 'one size fits all' approach, relying rather singularly on fixed, area-based, zonal demarcations of marine resources and space. These tools and directives have a tendency to work on the basis of 'territorialization' (of creating territories or bordered zones within which to control activities, life, resources) [4–6]. This borrows from the land, from 'terra' (ground), where lines, fences and borders have been, and continue to be, physically marked and built-upon for the purposes of governance [7].

Why does this matter? Despite the efforts of governance to embrace complexity, the art of governing remains rather static, one-dimensional and flat (literally) as it manifests in area-based plans and the marking of zones. Why do such territorializing logics hold fast in ocean governance? What follows is perhaps not a 'conventional' paper on the topic of ocean governance and the management techniques and policy interventions related to marine environments. It is not focused on specific matters related to one type of area-based management tool (such as a Marine Protected Areas (MPAs)), or explicit examples of Marine Spatial Planning (MSP), or even site- or species-specific case studies of governance. This is a paper that goes *before* these interventions to interrogate the *ontologies* that drive our approaches to governance and management of the marine environment at the outset. In other words, this is a paper that unpacks the seemingly 'abstract (*geo*)philosophies' (to quote [1], p. 8) underscoring contemporary approaches to the organization of marine space for sustainable management and conservation. It is a paper that seeks to track through the territorializing logics that lie at the heart of ocean governance (building from scholars such as Steinberg [8] and more recently Gray [6]).

I begin the paper by considering the terms, ontologies and geophilosophies, as well as couching the paper within existing work that theorizes ocean governance and pays attention to the logics of territory that shape it. I then break the paper into three parts. I start by exploring the ontological geophilosophies—the assumed spatial principles—that tend to direct ocean governance and management techniques. These relate to the use of *territorially based*, areal, zoning mechanisms for managing marine environments. I question how territorial tools have become a 'go to', unquestioned *blueprint* for governance of the oceans and explore their shortcomings. I then 'go to sea' to examine how other *de-territorializing* ways of knowing and understanding (through a fluid geophilosophy, or a wet ontology) may allow for other ways of governing if we allow ourselves to move beyond the management strategies that we simply accept as 'given'. In the penultimate section, I reflect upon these 'new' approaches, while also cautioning that we must look further back in history to consider how recent modes of *re-territorialization* are occurring through neocolonial 'grabs' of ocean space. I close by offering reflections for future work. In tracking through these ontological, geophilosophical, *territories of governance*, I aim to challenge the boundaries of management and conservation practice as part of this Special Issue that focuses on marine conservation, and specifically 'examining economic, management and governance

approaches that contribute to effective marine conservation in practice,' as the guest editors note in the Introduction [9].

2. Ocean governance in a vacuum? Setting the scene

Ontologies and geophilosophies. These might appear as abstract, even stuffy words, irrelevant to the practical work of ocean governance. Yet they allow us to interrogate the very *basis* of ocean governance and its tools and techniques [10]. Ontologies are the regimes of what we believe exists in the world (for example, we might believe the world exists independently of us (a realist ontology) or that the world only exists in the context of us (we 'make' the world, a so-called anti-realist ontology), see [1]). In other words, 'ontology seeks the classification and explanation of entities' ([11], n.p.). Ontology often becomes 'buried' in research, but all research is informed by ontological questions ([11], n.p.). Moreover, ontological questions are often taken for granted as 'immutable' (we simply know *what* exists and how (the latter being epistemology)) ([11], n.p.). Yet exploring ontology as a central concern is crucial. It allows us to explore the 'nature of being' ([11], n.p.), in turn unpacking 'ontological assumptions' that drive what we know, and in turn what we do. This is because what we 'do' is not separated from how we think ([12], p. 19). How we govern in practice is therefore driven ontologically.

Unpacking ontologies forms the focus of this paper in offering a theoretical tracking of the uncharted territories of how the ocean (and the resources and life within it) are organized, managed and conserved. The aim of unpacking ontologies is to prise apart the ontological assumptions of what exists in the realm of ocean governance: the tools and techniques that often become the default modes of marine management. This means exploring the 'nature of being' of those tools, techniques, approaches: the ontologies, belief systems, ways of knowing, understanding and 'doing' that shape governance and policy. 'Geo-philosophies' is a further term used in this paper to refer specifically to *geographically* informed modes of thinking that come to shape our understandings of what exists (territory, space, place and so on). The 'geo', I argue, is a core part of the ontologies driving ocean governance. Indeed, it is geographically informed ideas of what exists—the ocean *as a space that can be territorialized*—that shape how oceans are bordered, bounded, zoned and demarcated for management (see, for example, [6]). I posit that thinking about territory—the 'apportioning' of space [5]—is vital where it has become a naturalized mode of thinking that underlies many modes by which governance is performed and ocean management tools and policy directives are deployed.

Indeed, the literature on ocean governance and management techniques predominantly derives from scientific disciplines (which provide the basis for planning) and policy-related social science fields, leaving a lacuna in more critical discussions of ways of knowing and understanding the world that drive it. This is now changing. Recent years have seen an increase in work that considers unequal power relations, exclusions and omissions in ocean governance processes and outcomes, and challenges in regimes of participation and decision-making (see [13–18] for just a few examples). Moreover, research *has* considered some of the underlying processes that shape the form and outcome of ocean governance techniques (see, for example, Clarke and Flannery [19] on the 'gaps' between how MSP is imagined and practiced as

post-political; Gray's work [6] on how high seas conservation practices borrow state-based territorial logics; or recent interventions by Ntona and Schröder [20] on how MSP neglects the materiality of the ocean in modes of organization, or Segi [21] on the neoliberal ideologies that shape conservation).

However, while these contributions make important, critical in-roads, they often stop short of examining in greater detail, ontological questions that drive our approaches to governance *in the first place*, and in particular the underscoring spatial logics that inform many management techniques. The work of Boucqey and colleagues [22] and Havice and Zalik [23] provides important exceptions. Although not focused on territory, the latter authors address the ontological and epistemological drivers of ocean use, management and governance through the ocean's construction as a frontier space. They show how this spatial imaginary—the frontier—legitimises engagements with the ocean for control, appropriation, exploitation and extraction. Building from such philosophical discussions, I take inspiration from a wave of scholars [6,10,24,25] who are braving the territory of ontological discussions in relation to modes of governing and managing the environment, building on my own (co-authored) work in the process [26,27]. Notably, this paper develops from Gray's pivotal work on 'conservation territories' [6] and Walsh's germinal work that argues the need for 'increased attention to the role of territory and territoriality in framing sociospatial discourses in the context of spatial plan making', where he notes the necessity to take seriously 'territorial structures' in modes of spatial management ([25], p. 307). These are ontological, geophilosophical, questions. Although Walsh makes his arguments on grounded terrain, they are pertinent also for the sea, as Gray shows, a space that is 'disciplined' through ontological understandings that position it as a space that can be 'zoned' [28,29], 'enclosed' [30,31] and ultimately subjected to waves of 'territorialization' [7,31].

It is necessary that applied policy work on management and governance brave a consideration of ontology and geophilosophy for the simple reason that such work is inherently theoretical, whether this is realized or not (to quote [1], p. 8). As Pamela Shurmer-Smith notes,

The way to understand theory is to start by recognizing that everyone is (always and already) using it to construct meaning. All ways of looking at things – ideological positions, values and morals, notions of relevance and utility, all expectations, ways of classifying – are theoretical... This applies in everyday life and in the natural sciences just as in the arts, humanities and social sciences. ([32], p. 11)

Indeed, work in the sciences that informs the organization, management and conservation of oceans is not without theory, but is based on ideas of what does and can exist, as a precursor to modes of hypothesizing, testing and modelling future scenarios (see, for example, work in biodiversity theory). Likewise, as I have demonstrated already, work in the social and political sciences that also shapes the arrangement, control and protection of oceans is not without theory. Shurmer-Smith's observation then provides good news. For while there may be some hard graft involved in working and thinking philosophically (as this paper may perhaps demonstrate), we are all using theory, all of the time, anyway: we just need to be cognizant of it. Arguably, we need to (under)mine ontological assumptions to better interrogate and understand our modes of governing and managing marine environments. Ignoring the ontological foundations of governance undermines practical and applied reflections and interventions by presenting them *as though they exist in a vacuum*.

In unpacking ontologies and geophilosophies, I argue that we may be able to better understand and explain the 'nature of being' and 'assumptions' underscoring ocean governance and management. We may be able to identify the limitations that such assumptions pose to how we 'do' governance at sea. It may allow us the opportunity to reflect on other ways of governing that are not locked-in to such established, engrained and 'given' modes of doing ocean management. We may also be able to govern more equitably. Accordingly, in what follows I offer a conceptual contribution to understanding ocean governance and the management of spaces for the protection marine biodiversity, organization of extractive industries, the arrangement of global shipping and other 'blue-economy' uses. I do so through tracing the ontologies and geophilosophies that underscore ocean governance and management approaches. Each of these ontologies and geophilosophies, I posit, is driven by ways of thinking with and about *territory*, which becomes a naturalized mode of thinking that underlies many modes of 'doing' marine conservation and governance. I begin by exploring territorializing logics, before turning to de-territorializing approaches, and then modes of re-territorialization in the present.

3. A blueprint from the land: placing ocean governance territorializing logics

The Area. This is the name given in the United Nations Convention on the Law of the Sea (UNCLOS) in relation to the 'seabed and ocean floor and subsoil thereof, beyond the limits of national jurisdiction' (UNCLOS, Part 1, §1, [33]). It is a space governed by the principles of the 'the common heritage of [hu]mankind' referring to the fact that '[n]o State shall claim or exercise sovereignty or sovereign rights over any part of the Area or its resources, nor shall any State or natural or juridical person appropriate any part thereof. No such claim or exercise of sovereignty or sovereign rights nor such appropriation shall be recognized' (UNCLOS, Part 11, §2, Article 137, [34]). With prospecting (the identification of sites for potential Deep Sea Mining (DSM)) already established, explorations (investigations into these sites and their capacity for mining operations) well underway, and exploitation (the physical removal of deep seabed resources) arguably not far behind, DSM in the 'Area' (as it is commonly known) is likely to become a significant domain of mineral extraction in future [35]. DSM has been described as the new 'frontier' space of global capitalism [36] within a 'blue' economy moment [37].

Managing and governing activities of prospecting, exploration—and in future exploitation—of the Area is the International Seabed Authority (ISA), a body designated through UNCLOS to steward over this space. As UNCLOS, Part 11, §2, Article 137 [34] relays, '[a]ll rights in the resources of the Area are vested in [hu]mankind as a whole, on whose behalf the Authority shall act. These resources are not subject to alienation. The minerals recovered from the Area, however, may only be alienated in accordance with this Part and the rules, regulations and procedures of the Authority'. It is the ISA that sets out the 'regulatory framework' for commercial mining interests, and the 'Mining Code', which covers 'all 3 mining stages in the Area—prospecting, exploration, and exploitation', requiring for each, specific Environmental Impact Assessments ([38], p. 681). While in some cases it is nation states that are driving DSM activities, more often than not, this prospecting and exploring is occurring via multinational contractors—global

corporations—with the research, science and technology capabilities to enable such activities. This makes DSM a complex territory see [35,36,38–40]. Given that the ‘Area’ is legally protected as ‘common heritage’, the ISA requires ‘that interested entities, if not a Member State itself, must first obtain sponsorship from a state that is party to UNCLOS’ to enable it to carry out such activities ([38], p. 681). While this assumes cross-country consent for activities—and assistance for ISA from that country in the activities of an operator engaging in DSM prospecting, exploration and exploitation—the ways in which DSM activities are developing, enveloping huge swathes of sea-floor space into territorialized pockets for mineral removal and monetary gain, are deeply problematic [39].

While there is much more to say about the science and politics of DSM, it is the ontologies of being—the very nature of modes of governance that exist and that drive the *management and governance* of the Area—with which I am most interested. Looking to the ‘Area’ provides a good example of a *territorially based* geophilosophy that drives many approaches to organizing the ocean for economic use, but also conservation. The making of territories, I argue, has become a *blueprint* approach for ocean governance. On a very basic level, the making of territory refers to processes of ‘territorialization’ (of creating territories or *fixed*, bordered zones within which to control activities, life, resources; see [4], p. 3). As Stuart Elden, a leading scholar of territory has noted, studies of territory have typically understood it to be the ‘bounding’ of space, typically a *surface* ([4], p. 3) where the state (or other actors) create a ‘bordered power container’ ([41], p. 799). Territory, then, as described by Gray, is not a ‘given’, but is ‘political technology’ ‘produced through technical and legal means’ ([6], p. 259, citing Elden [42]).

Consider again, the name given the seabed beyond national jurisdiction. *The Area*. The word ‘area’ refers to a two-dimensional measure of surface, which defines a particular place, piece of land or country [43]. The designation of the ‘Area’ in the first place speaks of the bounding designation of a ‘flat’, ‘surficial’ zone of the seafloor (in spite of the fact activities take place in three-dimensional space, where mining requires movements through the water column, and exploitation may result in vertical, spherical plumes of material that disturb surrounding habitats). The management and governance activities of the ISA, in issuing licenses or contracts for prospecting, exploring and extracting, are likewise based on these technical, legal, flat, areal, territorializing principles. Indeed, in 2019, the ISA had,

15-year contracts with twenty-seven contractors for exploration for polymetallic nodules, polymetallic sulphides and cobalt-rich ferromanganese crusts in the international seabed area (the Area). The areas being explored are in the Clarion Clipperton Fracture Zone, the Indian Ocean, Mid Atlantic Ridge, South Atlantic Ocean and the Pacific Ocean. For polymetallic nodules, the entitled exploration area allocated to each contractor is 75 000 square kilometres. For polymetallic sulphides, the entitled exploration area allocated to each contractor is 10 000 square kilometres and consists of 100 blocks. Each block is no greater than 100 square kilometres. For cobalt-rich ferromanganese crusts, the entitled exploration area allocated to each contractor is 3000 kilometres and consists of 150 blocks. Each block is no greater than 20 square kilometres. [44]

As the quote reveals, the measurements of zones for contractor activities are set out *territorially*: they establish clearly defined units of space, *within which* activities are made possible. This is via the creation of mathematically bordered spaces, based on square kilometres (a flat measure of area). When categorizing the parameters of an activity, the management tool used by the

ISA is a territorial one, focused on carving the ocean floor into discrete parcels, creating neat pockets of space for potential DSM. Indeed, a browse of the exploration area and maps on the ISA website [44,45], reveals a *territorial* ontology (regimes of what we believe exists) and geophilosophy (a geographically informed mode of thinking) for ocean management. The maps each show clear, flat, blocked zones of contractor jurisdiction, following a way of thinking and understanding that determines that control and management must take place *within* defined zones. More significantly, however, each map illustrates an ontology that is built on established *landed* modes of designating space.

Indeed, such modes of demarcating space do not ‘belong’ at sea but have been transported there from the land and landed logics of territory-making, governance and control. That is not to say such logics belong on land either, and it is important to remember spatial demarcation and acts of territorialization are always (political) constructs. However, territory is typically a political technological of the *land, earth, ground*. This is because, as Peters, Steinberg and Stratford note, ‘land’s assumed stability, as well as the ways in which it is amenable to visible striation by humans, has led to its elevation as the paradigmatic space of partition and control...Here, on solid earth, we can erect walls, build fences, insert checkpoints’ ([7], p. 2). Indeed, the ‘birth’ of territory occurred through landed demarcations and lines of divisions and zones of state jurisdiction and control ([4], p. 3). There is then, an ‘assumed correspondence of territory with land’ ([7], p. 2), and governance with ground. The art of governing—in short—has been built on *solid* foundations. Returning to DSM, this is important, for what the ISA activities and marine maps show is that ways of organizing the governance of offshore mineral extraction have borrowed from *grounded* ways of organizing the management of space.

This landed ontology and territorial geophilosophy is an underlying discourse of ocean governance so powerful that it is rarely questioned (although see [7]). Indeed, Lambach [30] situates the dominating ontology of oceanic control as akin to landed methods of enclosure. He argues the ocean is another domain subjected to the modern processes of the nation-state to contain space for ‘legibility, control and resource exploitation’ ([30], p. 3). Ryan makes a similar argument in respect of the desire to ‘zone’ ocean space for plays of political power and nation-state security [28,29]. As he notes, ‘[z]onation ...has long been used as a way to bring certainty and rationality to the chaos of everyday life on terra firma’ and such “zonal logics” are analogous with desires to zone at sea’ ([29], p. 1056). Examples of taking, demarcating, flagging, controlling, working and extracting wealth are functions of enclosure and zoning linked to territorial, landed enclosures/zones, which, as nation states have extended their reach (literally) across oceans, have extended *into* this very domain. Lambach sets out three waves of enclosure of the oceans that have acted to territorialize it like land: the first is linked to acquisition of territorial seas for coastal nations, the second to extensions of modes of nation-state exploitation through the designation of Extended Economic Zones and a new ‘third wave’ through MSP and acts of ocean grabbing (see also [24,46]).

Most notable in these discussions—and important in the context of DSM too—is that such logics to territorialize, annex and zone happen not so much for ocean conservation and protection of the environment, but first and foremost, for economic exploitation [37,46]. Indeed, Campling and Colás, in a pivotal paper, coin the term ‘terraqueous territoriality’

to refer to state-based 'appropriations' of the global ocean for capitalist means of exploitation. They argue that attempts of 'capital accumulation... territorialise the sea through forms of sovereignty and modes of appropriation drawn from experiences on land' as nations seek to 'flatten' the geophysical divide between land and sea ([46], p. 776). This penchant for enclosure has become a blueprint for conservation measures, which themselves occupy a territory of tension between the desire to protect, but protect both environments *and* economic livelihoods through blue economy uses [47].

In sum then, ideas of how to govern are often based on *landed* models and modes of territory, taken to sea. They are not the only ways of organizing space, but they have *become* the established mode of doing so through knowledge systems that use the *groundwork* of landed modes of control as a blueprint for management in other domains (sea, sky, etc.). As Lambach notes, this construct is problematic (see also [8]). As he writes, 'to enclose the oceans is not due to some greater effectiveness of spatial instruments but because enclosure fits better with prevailing late modern notions' ([30], p. 3). In turn, as Gray notes, territory has become a particularly powerful concept in marine conservation where,

...specific kinds of knowledge and representations – namely, biophysical science and geospatial technologies of visualisation – are simultaneously constituting the high seas and efforts to conserve them *in terms of territory*. Actors engaged in these knowledge-making practices are creating an 'imaginative geography' (...) of the high seas, which underpins efforts to develop a legal regime that could support the establishment of high seas conservation territories. ([6], p. 258)

These practices of landed-territory making at sea are then established via reiterative practice (the continuous formation of MPAs and modes of static MSP) reinforcing such devices of governance as natural, and *the ways things are done* in marine management. This creates ontological stability and ontological assumptions of what can exist. We see this in approaches to MSP where it functions as a 'public process of ... *allocating the spatial and temporal distribution of human activities in marine space* to achieve ecological, economic, and social objectives that are usually specified through a political process' (Douvere and Ehler 2011, in [48], p. 256, emphasis added). MSP has been a far reaching approach deployed to 'allocate space for specific uses', 'to avoid use conflicts' and 'to improve the management of marine spatial claims, and to sustain an ecosystem-based management of seas and oceans' ([49], p. 797). Likewise, MPAs have become the 'go to' method of attempting 'to protect and conserve the functioning and integrity of marine and coastal ecosystems... often (with) an explicit socio-economic purpose to maintain or enhance a resource base for human use' ([50], p. 611).

Through such extensive deployment, it becomes difficult to imagine managing the marine environment by any other means than planning via the striation and areal demarcation of space. This is important when we then consider the governance and management of the seas and oceans, as the example of DSM and the Area reveal. Area-based zoning measures—from the designation of 75 000 km² for exploration of polymetallic nodules, to large-area MPAs, to zones of MSP in the delineation of oceanic uses (from fishing, to renewable energy, to aquaculture)—are not pre-determined 'givens'. Our modes of territorial governance are creations (to follow [6]) and they in turn establish particular fixed, static and flat modes of organizing the marine realm. This

is not to say that such territorializing measures are undesirable or do not work. MSP, for example, in its area-based designations, has been heralded by many as successful for overseeing multi-use activities in marine space and future-proofing blue economic activities (e.g. [51,52]). Likewise, the UN Decade of the Ocean spells out the success of a growing number of MPAs for conserving and protecting large zones of the ocean, within and beyond national jurisdiction (UN Decade of Ocean Science Website [53]). Yet there has also been much critique of these measures, for example the ocean grabbing implicit in the allocation of some MPAs [6,13] and the challenges and failures of MSP directives [54–56]. The literature is not lacking critical assessment. However, it doesn't (often) take the step further in considering the basis through which those tools come to be used and to function in the first place, and the ontological basis that informs their choice as 'go to' governance and management tools.

Stephen Jay's recent work on MSP ([57], along with [58]) provides some exception, where they note the relation between MSP and landed modes of planning, which can create deep-seated issues when translating landed-based planning to the marine environment. Jay has noted that marine planning is too 'rationalistic' based on its grounded origins [57], building from Kidd and Ellis' arguments as to the lack of critical reflection on how landed modes of planning space relate to the planning of marine space [58]. Gray's aforementioned work on conservation territories also takes the 'landed' models of territory seriously when analysing ocean protection strategies in the high seas [6]. Gray has shown how territorial thinking determines who is 'in' and 'out' in coordinating conservation strategies [6]. Yet territory—the fundamental basis on which *the very notion of much ocean governance is constructed*—as these authors show, has ramifications when we then seek to take governance beyond the land, or in the words of Peters and colleagues: *beyond terra* [7]. Indeed, in relation to regimes of EU MSP, Jay argues that stark territorial boundaries typical of land planning are unhelpful in a 'lively' marine realm (this is also argued by Duck [59]). Jay urges for a 'softening' of boundaries, noting that the liquidity of the seas calls for fuzzy boundaries in governance, rather than hard lines. Going further still, in respect of MSP, Boucquey *et al.* [10] and Fairbanks *et al.* [24] challenge the idea of territorial *enclosure* in governance and MSP, using the idea of assemblage. Oceans are assemblages of parts that span and spread beyond sealed boundaries. In reimagining the ocean as an assemblage we may create a radically different and unsettled spatiality for management that draws in new voices, concerns, more-than-human life, exploitations and technologies [24]. Indeed, we might govern differently if we *de-territorialized* our modes of thinking and 'doing', and shifted from fixed to flexible ontologies, geophilosophies and, in turn, activities.

4. Going 'to sea': de-territorialization and the making of dynamic and flexible governance

In 2015, two very different papers were published, from two very different fields. One came from the domain of ocean policy, the other geography. Oddly, in spite of no conversation between the two sets of authors, they were saying much the same thing. The first paper, an empirically led paper on ocean management, critiqued approaches to governing the ocean that were based on those aforementioned geophilosophies

and ontologies of territorialization (the drawing of cartographic boundaries), and of groundedness. They wrote:

Most spatial marine management techniques (e.g., marine protected areas) draw stationary boundaries around often mobile marine features, animals, or resource users. While these approaches can work for relatively stationary marine resources, to be most effective marine management must be as fluid in space and time as the resources and users we aim to manage ([60], p. 42).

The second paper, a theory-driven paper, made the same point in different language:

The ocean... through its material reformation, mobile churning, and nonlinear temporality—creates the need for new understandings of mapping and representing; living and knowing; governing and resisting. Like the ocean itself, maritime [and marine] subjects and objects can move across, fold into, and emerge out of water in unrecognised and unanticipated ways. It is in this context that we advocate thinking from the ocean as a means toward unearthing a material perspective that acknowledges the volumes within which territory is practised: a world of fluidities where place is forever in formation and where power is simultaneously projected on, through, in, and about space. ([26], pp. 261–262)

What both were challenging was the difficulty of transferring a landed way of ‘doing business’ to sea in respect of the dynamism of the sea and mobility of life within it. They were presenting alternative geophilosophies (geographically *de-territorialized* modes of thinking) and different ontologies (of a world not rooted, but *mobile*). The sea, both sets of authors argued, is geophysically liquid, mobile, three-dimensional. You can draw a line on map, but not the ocean itself. You can attempt to designate a zone, but the sea and life at sea move [61,62]. More so, because the deep sea is legally an international space and for the most part is beyond state jurisdiction, it cannot be territorialized in the same way (although this, of course, does not stop some from trying; see [6]). These different modes of knowing and understanding, of fluid geophilosophies and ‘wet’ ontologies—of *de-territorialization*—unlock different potentials for ‘doing’ governance.

In late 2016, I began a project searching for examples where less mainstream governance regimes were being developed. These were ways of organizing the marine realm that had mobilized a radically different ontology from the territorializing, grounded practices typical of ocean management. It is, of course, difficult to search for such approaches that diverge from the accepted, dominant regimes of marine governance. Indeed, where do you start to find ‘experimental’ modes of managing the seas and oceans, and the activities, and life, within them? Such an approach requires looking beyond the ‘trap’, as Elden calls it [42], that can be territory. As Elden urges, we need to start from a point of looking beyond accepted knowledge regimes [42]. This requires a substantial cognitive shift to recognize our own indoctrination in the reproduction of such traps. Instead we must be aware of how this ‘constrains our thinking’ and ‘hamstrings our potential for critique’ ([42], p. 757). Undertaking this work creates space to see or make visible other organizations of governance. This can occur through a tracing of stories, a listening to new narratives, an openness to future scenarios, built through an array of data including official records, archives, mind maps, interviews, oral histories and other qualitative as well as quantitative data sources, including modes of scenario formation to imagine oceans differently through time (for the latter see [63]).

The Bering Strait is a narrow seaway of 44 nautical miles positioned between the landmasses of Russia and the American archipelago of Alaska [64]. It was an area with little explicit marine governance, in part because it has not been a well-used global transport route (although it has, historically been a ‘nexus’ for localized trading, something typically ignored in contemporary governance developments; see [65]). Yet with climate change, ice melt, and an increasingly viable passage emerging, vessel traffic is increasing and with it risks to marine life [65]. Indeed, as the Pew Charitable Trust have noted, this poses unique challenges for,

a highly productive marine ecosystem... Almost the entire western Arctic population of bowhead whales travels through the strait twice a year. It also provides important food for the Pacific Walrus, spectacled eider, and grey whales. An estimated 12 million seabirds nest or forage in the area each year. The strait is also home to indigenous communities whose inhabitants have lived a traditional way of life along its shores for untold generations. [64]

With ecosystem threats owing to ship strikes, noise, discharge and contamination [65], efforts began to consider mechanisms to mitigate potential harm. In 2010, the United States Coastguard (USCG) began a consultation regarding the implementation of a ship routing scheme for the Bering Strait to guide increased shipping traffic. Although pertaining to mobility—guiding the movement of ships along a corridor—the technique of governance planned and proposed rested on the very static, fixed, territorializing and grounded modes of spatial management typical in marine environments.

A maritime motorway, suggested through the USCG Port Access Route Study, would create a static corridor, cut through space, mapped onto the ocean as a surficial device of management. It was a solution that sought to fix in space governance, in a realm of mobility, where whales, walrus, fish, ice, all move. Against this backdrop, an organization, a Marine Exchange was already working with a different geophilosophy and ontology. The Marine Exchange of Alaska (MXAK), a non-governmental, not-for-profit organization that has been operating since 2001, embodies a networked approach to maritime domain awareness. Through a process of information dissemination to help guide users of the marine environment, it is also flexible and responsive to the very mobile and dynamic environment in which it operates, sharing information in ‘real-time’. As Captain Ed Page, director of the MXAK noted, this presents a radically different way of thinking about how we protect and conserve the Bering Strait.

So my point is I think the best way to manage places like the Bering Strait is actually send information ... using this new technology, warn those at risk... you can say ‘you can go through the Bering Strait but here’s the guidelines now, just stay this far away from shore and ... we’ll let you know where you can go when you get there because it’s a dynamic situation (Captain Ed Page, unpublished interview, 5 November 2016).

Built through networks—of satellites, weather stations, radar sites, ships, processed AIS data from the Marine Exchange building, the desk operators, the environment itself, fog, rain, sun, mobile marine life, ice floes—the organization of space emerges through an ethos of knowledge sharing that has *no discrete territorialized boundaries* built on landed assumptions, but reflects the very relational and connected nature of the marine environment and the human and more-than-human ‘actants’ using the space (see also [24]).

It works on a networked ontology responsive to ‘earthly’ processes and relations. This de-territorialized, open, networked geophilosophy provides us with an arguably less

areal, flat ontology for thinking about governance. By comparison, it provides us with a spherical, three-dimensional, imaginary, where the earth is connected in a system of related, networked, assembled and co-constituted parts; where the 'earth' is, as Elden notes 'in flux, dynamic, indeterminate, and changeable, rather than static and fixed' ([66], p. xiv). We might think of the Bering example not as a territorialized zone of management—a cartographic, fixed, mode of stewarding space—but an 'open building site' (to quote [67], p. 65). Although, to be clear, the MXAK is not a formal governance actor in Alaska (it is an NGO offering services for stewardship over the marine environment) it offers us, by example, a radically different view of how we might 'do' governance based on dismantling dominant territorial discourses. As Callon notes, an actor-network provides 'more an inspirational frame than a constraining theoretical system... (which) postulates between humans and nonhumans... (in) the configuration of sociotechnical network' ([67], p. 62). As Captain Page noted,

...with AIS (technology) you can actually send information to vessels, an icon or a box and explain what it is by visually showing the issue, like, 'this is an area to be avoided because of the presence of whale... Reduce your speed or give it a wide berth'. Or, 'there's a presence of ice here, so you want to avoid that ice because your vessel is not configured or not designed to operate in those icy conditions (unpublished interview, 5 November 2016).

Of course, such systems are based on goodwill and collaboration that might not be transferable to all examples, but it demonstrates an approach that exceeds [27] the limits of existing marine strategies. Indeed, although a very distinct example, it makes visible the possibility of a different way of doing governance. As Maxwell *et al.* note,

a shift towards dynamic ocean management... defined as management that rapidly changes in space and time in response to changes in the ocean and its users through the integration of near real-time biological, oceanographic, social and/or economic data.... can refine the temporal and spatial scale of managed areas, thereby better balancing ecological and economic objectives. ([60], p. 42)

5. Going back, to go forwards? Re-territorialization in ocean grabbing

There is, of course, a need to be just as cautious about these de-territorialized developments in marine management. Captain Page posits that 'new' approaches should not necessarily replace old ones with de-territorialized modes supplanting territorialized ones. Indeed, as noted, there is quite some evidence that conservation enclosures 'work'. Decisions on how to manage the marine environment should be based on the particularities of the situation: the balance between protecting the ecosystem, the economy, livelihoods and more-than-human oceanic life. In some scenarios, depending on the purpose of governance and the desired goals, zoning may be optimal; in others, not. As Captain Page noted, 'I mean the funny thing is that sometimes these things [dynamic approaches] don't replace something else, they just complement and supplement. They have different capabilities and different features' (Captain Ed Page, unpublished interview, 5 November 2016).

There is also a need to be cautious about any assumed benefits of de-territorialized approaches vis-à-vis their territorial predecessors. As Maxwell and colleagues note, there is still a 'gap' in some of the data needed to make responsive techniques workable ([60], see also [68]). They also rely on the dependability

of technological apparatus (satellite tracking systems and such like). In addition, there is a need to ensure that legal frameworks can support such developments where necessary ([60], p. 42). Boucquey and colleagues argue a point further, noting that we should be careful that the data driving such responsive or flexible processes aren't themselves making 'durable' new kinds of ocean knowledge ([10], p. 484). Data are always the mirror of their creator, not the world itself, and this can bring with it challenges in respect of reliability, especially where the data for such processes derive from portals of oceanic information collected and collated by various agencies each with vested (political) interests in how the marine environment is used and protected (and for whom) [69–71].

Indeed, while governance does involve a broad range of actors ([2], p. 317), it is not an equal process. In attempting to include a variety of sectors—humanitarian organizations; ocean conservancy NGOs; private companies; and beyond—governance is said to be 'bottom-up' rather than 'top-down' in developing modes of organizing, managing and governing people, activities and spaces. As such, the voice of much ocean policy tends to speak in a collective 'we' that represents all. Consider, for example, the strapline to the UN Decade of Ocean Science: 'the science *we* need, for the ocean *we* want' ([53], emphasis added). But who is that 'we'? What science is needed by different actors, and what kind of ocean do different people desire? Governance, management and policy, accountable as they may try to be, do not ensure every voice is heard and every perspective is accounted for (see Flannery *et al.* on MSP, [15,16] and the recent report on the latest BBNJ Intergovernmental Conference on Marine Biodiversity of Areas Beyond National Jurisdiction, for example, where some nations and perspectives were unable to participate fully [72]).

It is necessary to consider the discourses of territory and regimes of power within which territory as a 'political technology' sits [4]. Territorializing practice is a political means of *taking* and *appropriating* space [5,73]. Modes of ocean governance that are territorial, then, are not politically innocent—they involve the *allocation* and even *seizing* of space for a particular purpose (even where that purpose may be situated as a 'greater good'). In 2014, the Transnational Institute (TNI), Masifundise Development Trust and Afrika Kontakt laid out a brochure highlighting practices of ocean—the snatching of space through schemes such as MPAs, which while situated as beneficial for ocean protection and conservation, can by-pass the needs, experiences, knowledge and uses of local indigenous populations in relation to their ocean space [75]. Indeed, planning and conservation practices based on territorializing logics hold with them colonial traces where territories were first established through the violent land grabs of colonial and imperial enterprise (see [74], p. 10). It is important to go back and engage critically with these histories in the context of present day and future-oriented governance and management strategies to unsettle such approaches [74]. Moreover, it is important that a homogeneous 'we' (a 'we' that is often a white, western, and predominantly male) also steps back from the work of governance, not just to include, but *reorientate entirely* approaches to ocean governance through decolonialism. Only this has the potential to truly 'transform' the ocean for sustainability.

Indeed, the 2014 TNI report is a necessary reminder that '[t]hroughout the world, legal frameworks are emerging that undermine the position of small-scale fisheries producers and systems, while strengthening or reinforcing the position of corporate actors and other powerful players' ([75], p. 6) in such

acts of territory-making. As the report also highlights, such governance approaches are based on the understanding and assumption—an ontological assumption—that the seas are empty (an ongoing oceanic trope, see [8,75,76,77]), and are empty of existing forms of management and stewardship ([75], p. 11). As the TNI Agrarian Justice Programme, Masifundise and Afrika Kontakt notes: '[t]his perspective ... totally disregards existing management and governance systems around the world' ([75], p. 11). Indeed, most ocean governance fails to acknowledge that many communities and societies around the world *have organized* and *continue to organize* their activities in ocean space. It also fails to appreciate that changes to 'our' oceans have been largely wrought through western, global north, imperial and capitalist expansion and industry that have created the very conditions by which ocean governance is even necessary in the first place (see also Yusoff on the Anthropocene [74]).

That is not to say that ocean grabbing is only committed by states and corporate actors, though. As Foley and Mather set out [78], there can be a complex interplay between small-scale fishers and processes of ocean grabbing and the term should not only be taken in the 'pejorative' ([78], p. 298). There is also a need to break down some of the 'normative assumptions' of ocean grabbing while remaining committed to tackling the 'dispossession caused by powerful grabbers such as government, non-governmental organizations (NGOs) or industry' ([78], p. 298). As they note, 'local users can themselves act as agents of ocean grabbing' and in addition, locally based, or non-industrialized Artisanal fishing communities may not always be 'victims' of ocean grabbing but engage in resistance and 'potentially progressive forms of ocean grabbing whereby groups 'grab' or 'grab back' resources based on principles of social justice' ([78], p. 298).

Nonetheless, neocolonialism in contemporary modes of marine governance is a very real concern [79]. It is not restricted to territorializing (and re-territorializing) modes of ocean governance but also the 'new', 'novel' modes outlined. Here de-territorialized modes of management also have the potential to impose new technological 'fixes' on ocean space and define problems as they are understood by western science and policy makers. As previously mentioned, these approaches may also create new inequalities in terms of access to technologies to make such governance regimes applicable, and can reinstate legacies of discrimination and prejudice through the choice of 'what' data and 'whose' perspectives are included in data-led approaches. 'We' (a global, universal 'we', which is also a 'we' of exclusions and partiality) must be aware, therefore, of discourses of re-territorialization that pervade contemporary governance landscapes. To quote Yusoff, we should be wary that '[t]he epochal *sea change* that is imagined actually reinstates the same old story of domination' ([74], p. 27, emphasis added).

6. Where next for the territories of governance? Further unpacking of ontologies and geophilosophies

In intervening in debates concerning ocean governance this paper has offered a theoretical tracking of the uncharted territories of governance that foreground marine management approaches. This task of upending the ontological assumptions of oceanic regimes of governance might have, as

Elspeth Graham notes in the quote at the start of this paper, struck you as 'irritating'. It may be seen to take time away from doing governance (collecting data, writing policy, forging marine management tools)—the main task at hand to save our oceans. But as I have argued, it is deeply problematic to go about saving our oceans without recourse to unpacking the ways of knowing and understanding that shape those modes of saving (or could shape those modes of saving in the future). Such debates are all the more pertinent as we approach a decade of attempting to do just this [53]. This paper has argued the need to critically understand the ontologies (the regimes of what we believe exists) and geophilosophies (the geographically informed modes of thinking) that underscore ocean governance and management to make sense of its past successes and failures, its present functioning, and its future directions. Without critical consideration of the kinds of thinking that structure (quite literally) ocean management, we may 'miss the boat' [80] in identifying different ways of knowing, thinking and understanding that could harbour greater transformative potential for sustainable development (all the while needing to be cautious of transformative governance, which may not be transformative for all actors—human and non-human in a given marine setting, see [14]).

This paper has unearthed the normative regimes, accepted tools and engrained languages often situated within *territorializing* and grounded approaches to governing the marine environment, and noted where different modes of thinking—alternative ontologies and geophilosophies based on *de-territorializing* notions of governance—may create the possibilities of 'novel' forms of ocean management for blue economy uses and conservation. It has ended by cautioning the need to look further back to colonial histories (and the colonial present) in relation to the ways in which governance is *re-territorializing* ocean space through continued modes of dispossession. In sum, this paper cautions that 'what we do when we accept the territorial trap is to buy into a ... narrative that normalises and naturalises this way of thinking' ([42], p. 757). As Lambach writes, while territory is the assumed ontology driving oceanic control, 'it is important to note that, at least theoretically, there are (or were) alternatives to enclosure' ([30], p. 2). Interrogating territory is thus vital to the study of ocean governance [6,25]. It is not enough to focus on current problems, possible solutions, needed science and desired policy interventions the without recourse to the modes of thinking, the geophilosophies and ontologies, and the *territorial* geophilosophies and ontologies, that inform these. Moreover, this effort has to be ongoing. It is not sufficient to raise ontological examinations once, as if ways of understanding what 'is' are finished and complete, and not always in the making. This paper urges scholars to continue unpacking the ontologies and geophilosophies of ocean governance, to be critical, and to question whether there might be alternative ways and means to achieve marine conservation in particular. An attention to zones, areas, sectors; borders, boundaries and limits; their ontological assumptions and stabilities in the realm of ocean governance may allow us to push those limits and to imagine—and in turn build—different governance futures.

Ethics. The project on which part of this paper is based (Invisible Infrastructure: maritime motorways and the making of global mobilities),

funded by the Leverhulme Trust (RF-2016-299), was granted ethical approval at the University of Liverpool via FOSEETH, the ethics panel for the School of Environmental Sciences (ethics reference number: 064) in June 2016. Fieldwork was conducted in Alaska in July 2016 and following on from this, remote interviews were conducted in Liverpool in 2016 and fieldwork and further interviews in 2017, which were all subject to informed consent using a project information sheet and consent form. The paper has also been reviewed by the interviewee(s) concerned for their approval.

Competing interests. I declare I have no competing interests

Funding. This research was funded by the Leverhulme Trust, RF-2016-299. This work was further funded by HIFMB, a collaboration between the Alfred-Wegener-Institute, Helmholtz-Center for Polar and Marine Research, and the Carl-von-Ossietzky University Oldenburg, initially funded by the Ministry for Science and Culture of

Lower Saxony and the Volkswagen Foundation through the 'Nieder-sächsisches Vorab' grant program (grant number ZN3285).

Acknowledgements. A version of this paper was first presented in 2019 at the 2nd Symposium of the Helmholtz Institute for Functional Marine Biodiversity (HIFMB) on the topic of Integrative Research Perspectives. I am grateful for the feedback gained at this event, especially from colleagues at the Nelson Mandela University in Port Elizabeth, SA. In developing the piece, I am grateful to the issue convenors Helmut Hillebrand, Ute Jacob and Heather Leslie for their support and also the anonymous peer reviewers and my long-standing colleague Philip Steinberg for their combined careful reading of earlier versions of this text and their thoughtful insights to help improve and clarify the arguments. Thanks also to the proofreader, Jessica Erland, for engaging so carefully with my manuscript. Final thanks are to Captain Ed Page for introducing me to the incredible developments in Alaska made by the Marine Exchange.

References

- Graham E. 2005 Philosophies underlying human geography research. In *Methods in human geography: a guide for students doing a research project* (eds R. Flowerdew, D. Martin), pp. 8–33, Second edition. London, UK: Routledge.
- Johnston R, Gregory D, Pratt G, Watts M. 2002 *The dictionary of human geography*. Oxford, UK: Blackwell.
- Jessop B. 1997 The governance of complexity and the complexity of governance: preliminary remarks on some problems and limits of economic guidance. In *Beyond market and hierarchy: interactive governance and social complexity* (eds A. Amin, J. Hausner), pp. 111–147. Cheltenham, UK: Edward Elgar.
- Elden S. 2013 *The birth of territory*. Chicago, IL: University of Chicago Press.
- Storey D. 2001 *Territory: the claiming of space*. Harlow, UK: Pearson Education.
- Gray NJ. 2018 Charted waters? Tracking the production of conservation territories on the high seas. *Int. Soc. Sci. J.* **68**, 257–272. (doi:10.1111/issj.12158)
- Peters K, Steinberg P, Stratford E. 2018 *Territory beyond terra*. London, UK: Rowman & Littlefield.
- Steinberg PE. 2001 *The social construction of the ocean*. Cambridge, UK: Cambridge University Press.
- Hillebrand H, Jacob U, Leslie H. 2020 Integrative research perspectives on marine conservation. *Phil. Trans. R. Soc. B* **375**, 20190444. (doi:10.1098/rstb.2019.0444)
- Boucquey N, Martin KS, Fairbanks L, Campbell LM, Wise S. 2019 Ocean data portals: performing a new infrastructure for ocean governance. *Environ. Plann. D Soc. Space* **37**, 484–503. (doi:10.1177/0263775818822829)
- Warwick University. 2017 'Ontology'. See <https://warwick.ac.uk/fac/soc/ces/research/current/socialtheory/maps/ology/> (accessed 25 June 2020).
- Peters K. 2017 *Your human geography dissertation: designing, doing, delivering*. London, UK: SAGE.
- Bennett NJ, Govan H, Satterfield T. 2015 Ocean grabbing. *Marine Policy* **57**, 61–68. (doi:10.1016/j.marpol.2015.03.026)
- Blythe J, Silver J, Evans L, Armitage D, Bennett NJ, Moore ML, Morrison TH, Brown K. 2018 The dark side of transformation: latent risks in contemporary sustainability discourse. *Antipode* **50**, 1206–1223. (doi:10.1111/anti.12405)
- Flannery W, Healy N, Luna M. 2018 Exclusion and non-participation in Marine Spatial Planning. *Marine Policy* **88**, 32–40. (doi:10.1016/j.marpol.2017.11.001)
- Flannery W, Clarke J, McAteer B. 2019 Politics and power. In *Maritime spatial planning* (eds J. Zauha, K. Gee), pp. 201–217. Basingstoke, UK: Palgrave Macmillan.
- Neimark B, Mahanty S, Dressler W, Hicks C. 2020 Not just participation: the rise of the eco-precariat in the green economy. *Antipode* **52**, 496–521. (doi:10.1111/anti.12593)
- Tafon RV. 2019 The 'dark side' of marine spatial planning: a study of domination, empowerment and freedom through theories of discourse and power. Doctoral Dissertation, Södertörn University. (<https://sh.diva-portal.org/smash/get/diva2:1306941/FULLTEXT01.pdf>) (accessed 17 March 2020).
- Clarke J, Flannery W. 2020 The post-political nature of marine spatial planning and modalities for its repoliticisation. *J. Environ. Policy Plann.* **22**, 170–183. (doi:10.1080/1523908X.2019.1680276)
- Ntona M, Schröder M. 2020 Regulating oceanic imaginaries: the legal construction of space, identities, relations and epistemological hierarchies within marine spatial planning. *Maritime Stud.* **19**, 241–254. (doi:10.1007/s40152-020-00163-5)
- Segi S. 2014 Protecting or pilfering? Neoliberal conservationist marine protected areas in the experience of coastal Granada, the Philippines. *Hum. Ecol.* **42**, 565–575. (doi:10.1007/s10745-014-9669-1)
- Boucquey N, Fairbanks L, Martin KS, Campbell LM, McCay B. 2016 The ontological politics of marine spatial planning: assembling the ocean and shaping the capacities of 'community' and 'environment'. *Geoforum* **75**, 1–11. (doi:10.1016/j.geoforum.2016.06.014)
- Havice E, Zalik A. 2018 Ocean frontiers: epistemologies, jurisdictions, commodifications. *Int. Soc. Sci. J.* **68**, 229–230. (doi:10.1111/issj.12198)
- Fairbanks L, Campbell LM, Boucquey N, St. Martin K. 2018 Assembling enclosure: reading marine spatial planning for alternatives. *Ann. Amer. Assoc. Geogr.* **108**, 144–161. (doi:10.1080/24694452.2017.1345611)
- Walsh C. 2014 Rethinking the spatiality of spatial planning: methodological territorialism and metageographies. *Eur. Plann. Stud.* **22**, 306–322. (doi:10.1080/09654313.2012.741568)
- Steinberg P, Peters K. 2015 Wet ontologies, fluid spaces: giving depth to volume through oceanic thinking. *Environ. Plann. D Soc. Space* **33**, 247–264. (doi:10.1068/d14148p)
- Peters K, Steinberg P. 2019 The ocean in excess: towards a more-than-wet ontology. *Dial. Hum. Geogr.* **9**, 293–307. (doi:10.1177/2043820619872886)
- Ryan BJ. 2015 Security spheres: a phenomenology of maritime spatial practices. *Security Dial.* **46**, 568–584. (doi:10.1177/0967010615598049)
- Ryan BJ. 2019 The disciplined sea: a history of maritime security and zonation. *Int. Affairs* **95**, 1055–1073. (doi:10.1093/ia/iiz098)
- Lambach, D. 2020 *Functional enclosures: the proliferation of area-based management instruments in ABNJ*. See https://www.researchgate.net/profile/Daniel_Lambach/publication/340829470_Functional_Enclosures_The_Proliferation_of_Area-Based_Management_Instruments_in_ABNJ/links/5ea014e8a6fdccda592c36fa/Functional-Enclosures-The-Proliferation-of-Area-Based-Management-Instruments-in-ABNJ.pdf (accessed 20 June 2020).
- Steinberg PE. 1999 Lines of division, lines of connection: stewardship in the world ocean. *Geograph. Rev.* **89**, 254–264. (doi:10.2307/216090)
- Shurmer-Smith P. 2002 *Doing cultural geography*. London, UK: SAGE.
- United Nations Convention on the Law of the Seas (UNCLOS). 1982 *S1 Introduction*. See https://www.un.org/depts/los/convention_agreements/texts/unclos/part1.htm (accessed 30 November 2018).
- United Nations Convention on the Law of the Seas (UNCLOS). 1982 *S2: Principles Governing the Area*. See https://www.un.org/Depts/los/convention_

- agreements/texts/unclos/part11-2.htm (accessed 30 November 2018).
35. Miller KA, Thompson KF, Johnston P, Santillo D. 2018 An overview of seabed mining including the current state of development, environmental impacts, and knowledge gaps. *Front. Mar. Sci.* **4**, 418. 1–24. (doi:10.3389/fmars.2017.00418)
 36. Zalik A. 2018 Mining the seabed, enclosing the Area: ocean grabbing, proprietary knowledge and the geopolitics of the extractive frontier beyond national jurisdiction. *Int. Soc. Sci. J.* **68**, 343–359. (doi:10.1111/issj.12159)
 37. Winder GM, Le Heron R. 2017 Assembling a Blue Economy moment? Geographic engagement with globalizing biological-economic relations in multi-use marine environments. *Dial. Hum. Geogr.* **7**, 3–26. (doi:10.1177/2043820617691643)
 38. Koschinsky A, Heinrich L, Boehnke K, Cohrs JC, Markus T, Shani M, Singh P, Smith Stegen K, Werner W. 2018 Deep-sea mining: interdisciplinary research on potential environmental, legal, economic, and societal implications. *Integr. Environ. Assess. Manag.* **14**, 672–691. (doi:10.1002/ieam.4071)
 39. Childs J. 2016 Geography and resource nationalism: a critical review and reframing. *The Extractive Ind. Soc.* **3**, 539–546. (doi:10.1016/j.exis.2016.02.006)
 40. Childs J. 2019 Greening the blue? Corporate strategies for legitimising deep sea mining. *Polit. Geogr.* **74**, Article 102060. (doi:10.1016/j.polgeo.2019.102060)
 41. Elden S. 2010 Land, terrain, territory. *Progress Hum. Geogr.* **34**, 799–817. (doi:10.1177/0309132510362603)
 42. Elden S. 2010 Thinking territory historically. *Geopolitics* **15**, 757–761. (doi:10.1080/14650041003717517)
 43. Cambridge Dictionary. 2020 'Area', Cambridge University Press. See <https://dictionary.cambridge.org/dictionary/english/area> (accessed 21 February 2020).
 44. International Seabed Authority (ISA). 2019 'Exploration Areas'. See <https://www.isa.org/jm/contractors/exploration-areas> (accessed 2 February 2020).
 45. International Seabed Authority (ISA). 2019 'Maps' (online). Available at: <https://www.isa.org/jm/maps> (accessed 2 February 2020).
 46. Campling L, Colás A. 2018 Capitalism and the sea: sovereignty, territory and appropriation in the global ocean. *Environ. Plann. D Soc. Space* **36**, 776–794. (doi:10.1177/0263775817737319)
 47. Silver JJ, Gray NJ, Campbell LM, Fairbanks LW, Gruby RL. 2015 Blue economy and competing discourses in international oceans governance. *J. Environ. Dev.* **24**, 135–160. (doi:10.1177/1070496515580797)
 48. Jones PJ, Lieberknecht LM, Qiu W. 2016 Marine spatial planning in reality: introduction to case studies and discussion of findings. *Mar. Policy* **71**, 256–264. (doi:10.1016/j.marpol.2016.04.026)
 49. Maes F. 2008 The international legal framework for marine spatial planning. *Mar. Policy* **32**, 797–810. (doi:10.1016/j.marpol.2008.03.013)
 50. Jentoft S, van Son TC, Bjørkan M. 2007 Marine protected areas: a governance system analysis. *Hum. Ecol.* **35**, 611–622. (doi:10.1007/s10745-007-9125-6)
 51. Ehler C. 2008 Conclusions: benefits, lessons learned, and future challenges of marine spatial planning. *Mar. Policy* **32**, 840–843. (doi:10.1016/j.marpol.2008.03.014)
 52. Jay S, Ellis G, Kidd S. 2012 Marine spatial planning: a new frontier? *J. Environ. Policy Plann.* **14**, 1–5. (doi:10.1080/1523908X.2012.664327)
 53. UN Decade of Ocean Science Website. 2020 See <https://www.oceandecade.org/> (accessed 3 March 2020).
 54. Cavallo M, Elliott M, Touza J, Quintino V. 2016 The ability of regional coordination and policy integration to produce coherent marine management: implementing the Marine Strategy Framework Directive in the North-East Atlantic. *Mar. Policy* **68**, 108–116. (doi:10.1016/j.marpol.2016.02.013)
 55. Cavallo M, Elliott M, Touza J, Quintino V. 2017 Benefits and impediments for the integrated and coordinated management of European seas. *Mar. Policy* **86**, 206–213. (doi:10.1016/j.marpol.2017.09.035)
 56. Cavallo M, Borja Á, Elliott M, Quintino V, Touza J. 2019 Impediments to achieving integrated marine management across borders: the case of the EU Marine Strategy Framework Directive. *Mar. Policy* **103**, 68–73. (doi:10.1016/j.marpol.2019.02.033)
 57. Jay S. 2018 The shifting sea: from soft space to lively space. *J. Environ. Policy Plann.* **20**, 450–467. (doi:10.1080/1523908X.2018.1437716)
 58. Kidd S, Ellis G. 2012 From the land to sea and back again? Using terrestrial planning to understand the process of marine spatial planning. *J. Environ. Policy Planning* **14**, 49–66. (doi:10.1080/1523908X.2012.662382)
 59. Duck RW. 2012 Marine spatial planning: managing a dynamic environment. *J. Environ. Policy Plann.* **14**, 67–79. (doi:10.1080/1523908X.2012.664406)
 60. Maxwell SM, Hazen EL, Lewison RL, Dunn DC, Bailey H, Bograd SJ, Benson S. 2015 Dynamic ocean management: defining and conceptualizing real-time management of the ocean. *Mar. Policy* **58**, 42–50. (doi:10.1016/j.marpol.2015.03.014)
 61. Acton L, Campbell LM, Cleary J, Gray NJ, Halpin PN. 2019 What is the Sargasso Sea? The problem of fixing space in a fluid ocean. *Polit. Geogr.* **68**, 86–100. (doi:10.1016/j.polgeo.2018.11.004)
 62. Havice E. 2018 Unsettled sovereignty and the sea: mobilities and more-than-territorial configurations of state power. *Ann. Am. Assoc. Geogr.* **108**, 1280–1297. (doi:10.1080/24694452.2018.1446820)
 63. Merrie A, Keys P, Metian M, Österblom H. 2018 Radical ocean futures-scenario development using science fiction prototyping. *Futures* **95**, 22–32. (doi:10.1016/j.futures.2017.09.005)
 64. PEW. 2014 *Arctic Vessel Traffic in the Bering Strait*. See <https://www.pewtrusts.org/en/research-and-analysis/reports/2014/04/18/arctic-vessel-traffic-in-the-bering-strait> (accessed 1 September 2017).
 65. Huntington HP *et al.* 2015 Vessels, risks, and rules: planning for safe shipping in Bering Strait. *Mar. Policy* **51**, 119–127. (doi:10.1016/j.marpol.2014.07.027)
 66. Elden S. 2018 'Foreword'. In *Territory beyond terra* (eds K. Peters, P. Steinberg, E. Stratford), pp. xi–xv. London, UK: Rowman & Littlefield.
 67. Callon M. 2001 Actor network theory. In *International encyclopedia of the social & behavioral sciences* (eds N.J. Smelser, P.B. Baltes), pp. 62–66. Amsterdam, The Netherlands: Elsevier.
 68. Lewison R *et al.* 2015 Dynamic ocean management: identifying the critical ingredients of dynamic approaches to ocean resource management. *BioScience* **65**, 486–498. (doi:10.1093/biosci/biv018)
 69. Carey M, Jackson M, Antonello A, Rushing J. 2016 Glaciers, gender, and science: a feminist glaciology framework for global environmental change research. *Progress Hum. Geogr.* **40**, 770–793. (doi:10.1177/0309132515623368)
 70. Haraway D. 1988 Situated knowledges: the science question in feminism and the privilege of partial perspective. *Feminist Stud.* **14**, 575–599. (doi:10.2307/3178066)
 71. Rose G. 1997 Situating knowledges: positionality, reflexivities and other tactics. *Progress Hum. Geogr.* **21**, 305–320. (doi:10.1191/030913297673302122)
 72. De Santo EM, Mendenhall E, Nyman E, Tiller R. 2020 Stuck in the middle with you (and not much time left): the third intergovernmental conference on biodiversity beyond national jurisdiction. *Mar. Policy* **117**, 103957. (doi:10.1016/j.marpol.2020.103957)
 73. Delaney D. 2008 *Territory: a short introduction*. Oxford, UK: Blackwell.
 74. Yusoff K. 2018 *A billion black anthropocenes or none*. Minneapolis, MN: University of Minnesota Press.
 75. TNI Agrarian Justice Programme, Masfundise and Afrika Kontakt. 2014 *The Global Ocean Grab: A Primer*. See https://www.tni.org/files/download/the_global_ocean_grab.pdf (accessed 17 March 2020).
 76. Hofmeyr, I. 2018 'Oceans as empty spaces? Redrafting our knowledge by dropping the colonial lens' *The Conversation*. See <https://theconversation.com/oceans-as-empty-spaces-redrafting-our-knowledge-by-dropping-the-colonial-lens-102778> (accessed 1 December 2019).
 77. Peters K. 2010 Future promises for contemporary social and cultural geographies of the sea. *Geogr. Compass* **4**, 1260–1272. (doi:10.1111/j.1749-8198.2010.00372.x)
 78. Foley P, Mather C. 2019 Ocean grabbing, terraqueous territoriality and social development. *Territory, Politics, Governance* **7**, 297–315. (doi:10.1080/21622671.2018.1442245)
 79. Foster JB, Holleman H, Clark B. 2019 Imperialism in the Anthropocene. *Mon. Rev.* **71**, 70–88. (doi:10.14452/MR-071-03-2019-07_5)
 80. Bennett NJ. 2019 Marine social science for the peopled seas. *Coastal Manage.* **47**, 244–252. (doi:10.1080/08920753.2019.1564958)