



Wet Ontologies, Fluid Spaces: Giving Depth to Volume through Oceanic Thinking

Journal:	<i>Environment and Planning D: Society and Space</i>
Manuscript ID:	EPD-2014-0148.R1
Manuscript Type:	Article
Keywords:	depth, liquid, ocean, sea, volume, water

SCHOLARONE™
Manuscripts

View Only

Wet Ontologies, Fluid Spaces: Giving Depth to Volume through Oceanic Thinking

Abstract

This paper expands on recent attempts to destabilise the static, bordered, and linear framings that typify human geographical studies of place, territory, and time. In a world conceptualised as open, immanent, and ever-becoming, scholars have turned away from notions of fixity towards fluidity and flow, and, in so doing, have developed networked, “flat” ontologies. Recent attempts have gone further, challenging the horizontalism inherent in such approaches by opening up a vertical world of volume. In this paper, we contend that such approaches are still somewhat lacking. The vertical element of volume is all too often abstract and dematerialised; the emphasis on materiality that is typically used to rectify this excess of abstraction tends to reproduce a sense of matter as fixed and grounded; and the temporality that is employed to reintroduce “motion” to matter has the unintended effect of signalling a periodised sense of time that minimises the chaotic underpinnings and experiences of place. We argue that the ocean is an ideal spatial foundation for addressing these challenges since it is indisputably voluminous, stubbornly material, and unmistakably undergoing continual re-formation, and that a “wet ontology” can reinvigorate, redirect, and reshape debates that are all too often restricted by terrestrial limits.

Keywords: depth, liquid, ocean, sea, volume, water

Introduction

Since we live on land, and are usually beyond the sight of the sea, it is easy to forget that our world is an ocean world, and to ignore in practice what that means... Geographically, it is not the exception to our planet, but by far its greatest defining feature. (Langewiesche, 2004: 1)

As others have remarked, the ocean is a paradoxical space, both “capital’s favored myth-element” (Connery, 1995: 56) and a site that suggests (unrealisable) potential for

1
2
3 transcending its striations and structures (Deleuze & Guattari, 2004). Langewiesche sums
4 up this contradiction by calling the ocean “free enterprise at its freest” (Langewiesche,
5 2004: 7), the paradigmatic space that binds the global political economy but that also
6 profoundly challenges its underpinning political ontology, a designation that resonates
7 with Peter Sloterdijk’s identification of the Modern Era ocean as the “entrepreneurial-
8 nautical yonder” (Sloterdijk, 2013: 79).

9
10
11
12
13
14 In previous works, we have chronicled how this tension has been productively
15 exploited by a broad range of nautical entrepreneurs, from libertarian venture capitalists
16 (Steinberg, 2011a; Steinberg et al., 2012) to hippy pirate broadcasters (Peters, 2011,
17 2014a). In this article, however, we direct our focus away from these individual and
18 collective actors who, finding themselves on the sea’s surface, use its liminality to engage
19 in transgressive political practice. Rather, we turn to the ocean itself: to its three-
20 dimensional and turbulent materiality, and to encounters with that materiality, in order to
21 explore how thinking *with* the sea can assist in reconceptualising our geographical
22 understandings. In short, we propose a *wet ontology* not merely to endorse the
23 perspective of a world of flows, connections, liquidities, and becomings, but also to
24 propose a means by which the sea’s material and phenomenological distinctiveness can
25 facilitate the reimagining and re-enlivening of a world ever on the move.

26
27
28
29
30
31
32
33
34
35
36 In taking this approach, we engage with the growing numbers of human
37 geographers who are turning away from the plane geometry of points, lines, and areas
38 that have long grounded the discipline. As Doreen Massey (2004) details, the Euclidean
39 conception of space as a stable surface provides unwelcome constraints that separate
40 spaces from the matter and meanings that occur within. From a Euclidean perspective,
41 the foundational “space” that remains after substance is stripped away is empty,
42 abstracted, and atemporal, and this provides a poor foundation for theorising relational
43 geographies of immanence. As an alternative, Marston et al. (2005) propose a “flat
44 ontology” that abolishes the notion of scale and replaces places with *sites*: “immanent
45 (self-organizing) event-spaces dynamically composed of bodies, doings, and
46 sayings...unfolding singularities that are not only dynamic, but also ‘hung together’
47 through the congealments and blockages of force relations” (Jones et al., 2007: 265).
48 Whilst this perspective expands the possibility of human (and non-human) interventions,
49
50
51
52
53
54
55
56
57
58
59
60

1
2
3 it fails to account for the chaotic but *rhythmic* turbulence of the material world, in which,
4 even amidst unique events of coming together, there is a persistent, underlying churn – a
5 dynamic pattern of repetition and re-formation that provides stability and texture in an
6 environment of underlying instability (Serres, 1996). The world is not divided into fixed,
7 hierarchical strata and scales; but neither is it “flat.”
8
9

10
11
12 Most recently, theoretical and conceptual interventions have sought to reanimate
13 space as both context and site of politics by emphasising its verticality, its materiality,
14 and its temporality. We draw inspiration from these efforts, but, as we detail below, we
15 also find them somewhat lacking. The vertical element introduced by scholars of volume
16 is all too often abstract and dematerialised; the emphasis on materiality that typically is
17 used to rectify this excess of abstraction tends to reproduce a sense of matter as fixed and
18 grounded – formed rather than processual; and the temporality that is employed with the
19 aim of reintroducing ‘motion’ to matter all too often has the unintended effect of
20 signalling a periodised sense of time that minimises the chaotic underpinnings and
21 experiences of place.
22
23
24
25
26
27
28
29

30 If the challenge facing contemporary geographic theory is to adopt a perspective
31 that recognises volume, matter, and emergence, the ocean would seem to provide an ideal
32 spatial foundation for theorisation since it is indisputably voluminous, stubbornly
33 material, and unmistakably undergoing continual re-formation. The third of these points
34 is taken up in Jon Anderson’s work on surfing when he writes that “the place of surf is
35 the very definition of a place that is unreliable, inconsistent, wholly provisional, and
36 unstable. It is a place that, at any moment, emerges in time and space from the web of
37 flows and connections meeting at a particular node” (J. Anderson, 2012: 575). Whilst our
38 approach is broadly complementary with Anderson’s, in this article we extend his focus
39 from the immanence of the more-than-human ocean encounter to related issues of
40 temporality, volume, depth, and flow that presently animate geographic theory. With a
41 wet ontology, we propose, we can reinvigorate, redirect, and reshape debates that are all
42 too often restricted by terrestrial limits.
43
44
45
46
47
48
49
50
51
52
53

54 55 **Nothing but Waves** 56 57 58 59 60

1
2
3
4 We begin our exploration into a wet ontology with a nod towards one of the most
5 thoroughgoing *dismissals* of the ocean in political theory, from Carl Schmitt's (2003) *The*
6 *Nomos of the Earth*. Establishing the foundational division of the planet's surface
7 between land and sea, in which the former is the privileged space of society, Schmitt
8 writes, "The sea has no *character*, in the original sense of the word, which comes from
9 the Greek *charassein*, meaning to engrave, to scratch, to imprint... On the waves there is
10 nothing but waves" (Schmitt, 2003: 42-43, emphasis in original). This viewpoint is
11 mirrored in the anthropological writings of Claude Lévi-Strauss, for whom the ocean is
12 "a diluted landscape" with an "oppressive monotony and a flatness" that fails to hold
13 qualities to enliven the imagination (Lévi-Strauss, 1973: 338-339), and Roland Barthes'
14 depiction of the sea as a "non-signifying field [that] bears no message" (Barthes, 1972:
15 112). For these thinkers, the ocean is a space rendered ideologically and physically
16 insignificant in reference to socio-cultural and geopolitical concerns.

17
18 Schmitt's denigration of the ocean is rooted in his perception of its
19 (im)materiality. He argues that the control of place, its transformation into property, and
20 the communication and fortification of that property's limits through fences and
21 boundaries is impossible in the unknowable, unscriptable, and uncontrollable space of
22 the ocean. For Schmitt, the ocean's qualities (or its lack of qualities) make it an unnatural,
23 dangerous space of occupation because it has few (earthly) connections to humans and
24 humanity. As such the seas are *insubstantial*:

25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42
43
44
45
46
47
48
49
50
51
52
53
54
55
56
57
58
59
60
Man [sic] is a terrestrial, an earthling. He lives, moves and walks on the firmly-
grounded Earth. It is his stand-point and his base. He derives his points of view
from it, which is also to say that his impressions are determined by it and his
world outlook is conditioned by it ... And since we found out that our earth is
spherically shaped, we have been speaking quite naturally of the "terrestrial
sphere" or of the "terrestrial globe. To imagine a "maritime globe" would seem
strange, indeed. (Schmitt, 2014)

In his earlier work, *Land and Sea* (Schmitt, 2014), which Eduardo Mendieta describes as
a "combination of mytho-poiesis, philosophical speculation and political mythology"

1
2
3 (Mendieta, 2011: 261), Schmitt is less dismissive, identifying a substantive logic in the
4 ocean, as well as in each of the other three fundamental elements – earth, air, and fire. In
5 this work, rather than portraying the sea as a space without inscription, Schmitt draws on
6 the works of Herman Melville, Jules Michelet, and others to identify the ocean as a
7 significant arena of agonistic struggle among humans as well as between humans and
8 nature. *Land and Sea*, however, is an outlier in Schmitt's oeuvre, his one work of
9 relatively pure philosophy (Mendieta, 2011). Eight years later, in *The Nomos of the Earth*
10 (Schmitt, 2003), Schmitt's approach is more firmly rooted in political history and state
11 theory, and as such he turns away from the "mytho-poetic" presence and meaning that he
12 ascribes to the ocean in *Land and Sea*. Instead, the ocean is "reduced to a series of
13 vectors that cycle in endless monotony," a space with neither a history nor a geography
14 (Steinberg, 2011b: 270).
15
16
17
18
19
20
21
22
23

24 In this article, we consider Schmitt's admonition in *The Nomos of the Earth* that
25 "on the waves there is nothing but waves," but we simultaneously contend that it is
26 precisely these waves that make the ocean productive for enlivening our understanding of
27 space, time, and motion. For Michel Serres, the monotony of waves, in their repetition
28 but also in their individuation and variation and in the ways in which their whole is
29 greater, but also less, than the sum of their parts, forms the *belle noiseuse*, the "nautical
30 murmur" under which, "in the strict horizontal of it all, unstable cascades are endlessly
31 trading" (Serres, 1996: 13). As "background noise," the *belle noiseuse* exemplified by the
32 ocean subtly insinuates itself into the ways in which we understand and organise
33 subjectivity, temporality, and spatiality. The *belle noiseuse* "is not a matter of
34 phenomenology [but] a matter of being itself. It settles in subjects as well as objects, in
35 hearing as well as in space, in the observers as well as in the observed," even as it resists
36 individuation into unitary components (Serres, 1996: 13). Whether one divides the ocean
37 into its noises (Serres, 1996), its microbes (Helmreich, 2009), its molecules (Steinberg,
38 2011a), or its affective resonances (Bachelard, 1994; Michelet, 1861), one is continually
39 faced by the paradox that any attempt to 'know' the ocean by separating it into its
40 constituent parts serves only to reveal its unknowability as an idealized stable and
41 singular object (Connery, 1996).
42
43
44
45
46
47
48
49
50
51
52
53
54
55
56
57
58
59
60

1
2
3 As Jonathan Raban describes, the interaction of the ocean's "unstable cascades"
4 should be understood not simply as the movement of water but the mutation of
5 atmosphere – space and time – as assembled from multiple elements:
6
7
8
9

10 In the making of waves, first the air "deforms" the water, which then begins to
11 "perturb" the flow of air across it; and it is out of this delicate intercourse ... that
12 the wave is born ... That morning ... the wind below down the long funnel of the
13 strait ... Waves barely formed were suddenly breaking white all around the boat.
14 (The toppling crest of foam returns to the air a tithe of the energy given by the air
15 to the water.) It took only minutes for the waves to find their natural periodic
16 rhythm and build into a short, steep, lumpy sea. (Raban, 1999: 164-165)
17
18
19
20
21
22
23

24 Each wave, shaped by the wind, marks the water's surface and gives the sea not only
25 (ever shifting) depth but also *form* – calm or angry, placid or brooding. These are variants
26 on Serres' "nautical murmur" that are both event and atmosphere, foreground and
27 background. The sea presents us with a space that is emergent through a particular co-
28 composition of matter and forces. In turn, this hydro-elemental assemblage allows us to
29 re-think motion and matter and how it shapes the world as we know it (J. Anderson,
30 2012; Lehman, 2013a; Peters, 2012; Steinberg, 2013).
31
32
33
34
35
36

37 Raban's designation of the sea as "lumpy" alludes to a sense of three-dimensional
38 form. As he describes, waves are "bulging, heaping ... an unruly brew of shifting planes
39 and collapsing hillocks" (Raban, 1999: 165). The sea here is both planar – horizontal,
40 "shifting" laterally – but likewise, it is vertical: moving upwards and downwards, rising
41 and subsiding with height and depth. In the sea, multiple mobilities engage each other in
42 "reciprocity" (Adey, 2010: 3), opening attention to unrecognised *volumes* of hydro-space
43 (see Elden, 2013a); a mosaic of vertical, horizontal, and angular shapes that provisionally
44 coalesce into a spherical voluminous realm of matter (Sloterdijk, 2011).
45
46
47
48
49
50

51 This construction of maritime assemblages is ripe with affective resonances and
52 haptic engagements, as is exemplified by Anderson in his discussion of "convergences"
53 with the surfed wave:
54
55
56
57
58
59
60

1
2
3 Surfers express their involvement with the place of the surfed wave in terms of
4 being “at one” with the amalgam of sea and swell, of “merging” with this
5 “medium,” of being “intimately connected” to it. These affects do not refer to the
6 execution of skills or to displaying the intense concentration that is associated
7 with flow experiences; rather, they refer to a sense of union with the component
8 parts of the surfed wave. (J. Anderson, 2012: 580)
9
10
11
12
13

14
15
16 Whilst rationalists “turn away from the waves to admire the wave-born” (Serres, 1996:
17 25) and romantics revel in the ocean’s alterity (see Mack, 2011), those who actually
18 *engage* the ocean, like sailors and, perhaps even more profoundly, surfers and swimmers,
19 become one with the waves as the waves become one with them, in a blend of
20 complementarity and opposition.
21
22
23

24 At such instances, the composition and power of the ocean – and the waves that
25 constitute it – is revealed. On the waves there may indeed be “nothing but waves.” But
26 these waves pose provocative questions for those who would seek to develop an
27 ontological perspective that problematizes accepted notions of time, space, mobility, and
28 materiality. It is to this “wet” ontology that we now turn.
29
30
31
32
33
34

35 **Territory, Verticality, and Volume**

36 To explore the power of thinking through a wet ontology we turn first to Stuart Elden’s
37 (2013a) call for territory to be reconceptualised as volume. Here, Elden reflects on Eyal
38 Weizman’s (2002) work on the politics of verticality. In analysing regimes of governance
39 and territories of warfare in the West Bank and Gaza Strip, Weizman proposes a three-
40 dimensional perspective that “cut(s) through the landscape,” shifting conceptualisations
41 of territory from that of a flat “two-dimensional surface” to a “multiplication of territory”
42 formed through “three-dimensional volume.” As Weizman explains,
43
44
45
46
47
48
49
50

51 It was only by introducing the vertical dimension, through schemes of over- and
52 under-passes, that linkage could be achieved between settlements and Israel,
53 between Gaza and the West Bank ... The horizon became a political boundary,
54 separating the air from the ground. At the same time, another boundary – dividing
55
56
57
58
59
60

1
2
3 the crust of the ground from the earth under it – has appeared. In the West Bank,
4 the sub-terrain and the air have come to be seen as separated from, rather than
5 continuous and organic to, the surface of the earth. (Weizman, 2002)
6
7
8
9

10 Elden argues, however, that Weizman's stress on the vertical projection and
11 production of power fails to capture the complex ways in which power is exercised
12 through, and in, space. As Graham and Hewitt (2013) note, Weizman successfully
13 challenges the *horizontalism* inherent in geopolitical discourse. However his approach
14 remains somewhat locked to a lateral vision. For Weizman, the vertical is opened by
15 "severing the territory into different, discontinuous *layers*" (Weizman, 2002, emphasis
16 added): the sub-terrain, the surface, the air. For Elden, by contrast, territory is constructed
17 not just by projecting power upwards and downwards, between and across fundamentally
18 horizontal surfaces. Rather, territory – a political technology that combines control of
19 land and terrain with ideas about its capacity for organisation through calculative
20 rationality – is achieved through the control of volumes. The notion of volume developed
21 by Elden applies a sensibility that owes a debt to Sloterdijk's (2011) extended
22 theorisations of interconnection (being-with) and volume. In particular, Sloterdijk's
23 employment of (interconnected) spheres to make sense of lived reality, relationality, and
24 geopolitical control is harnessed by Elden to alert us to the three-dimensional or orbicular
25 shape of territory. Here, Elden (this time borrowing from Paul Virilio (1994)) contends
26 that volume is not the opening of space to a further "axis" (the vertical). Rather, volume
27 takes into account "reach, instability, force, resistance, incline, depth and matter
28 alongside the simply vertical" (Elden, 2013a: 45) – the fully voluminous or spherical
29 qualities of space.
30
31
32
33
34
35
36
37
38
39
40
41
42
43
44
45

46 Elden's attentiveness to volume is interwoven with his broader concern that the
47 "geo" in geopolitics be understood as referring not to "space" (which is usually
48 understood as area) or "the global" (which is usually understood as areal extent) but to
49 "Earth" (Elden, 2013b). Although the technologies of territory may idealise the reduction
50 of "Earth" to "space," critical political geographers, according to Elden, should be
51 revealing how the technologies of territory "flatten" the world. This, in turn, requires
52 digging deeper into its underlying volumes.
53
54
55
56
57
58
59
60

1
2
3 In drawing our attention to the materiality of volumes, Elden hints at an important
4 point: the matter of “Earth” itself embodies a plethora of fluid properties. A *geo*-political
5 understanding requires that we be attentive to the rich variety of materialities that
6 constitute the volumes in which we live, and to how each of them enables and
7 complicates the construction of territory whilst exerting power in multiple dimensions.
8 As Elden explained to a conference of Arctic science and policy experts:
9

10
11
12
13
14
15
16 We can’t simply think of a straight-forward up-down vertical axis alongside this
17 flat, planar, areal imagination. We need to think about this in terms of slopes, in
18 terms of the materiality of these kinds of questions.... We need to think about
19 geopolitics not simply as global politics or as international politics, but very much
20 as a politics of the earth, and thinking about that in terms of bringing the
21 geophysical into relation with the geopolitical, thinking about the materiality of
22 the “geo” in terms of how we think about the question of geopolitics.... [*The*
23 *politics that results is] not, then, simply a politics of the solid land, but politics in*
24 *relation to water, ice, subsoil, and the submarine.* (Elden, 2013c, emphasis added)
25
26
27
28
29
30
31
32

33
34 Elden’s appeal to the materialities of volume beyond Earth’s surface (and its
35 corresponding atmospheric, liquid, and subsurface layers) is provocative because it
36 requires us to go beyond considering matter as static substance and leads us to consider
37 the various ways in which matter changes physical state as it moves through, and
38 simultaneously constructs, both space and time. In his commentary on Elden’s piece,
39 Gavin Bridge (2013) takes up this provocation, stressing how thinking of space through
40 volume complicates any attempt to take the material seriously. As Bridge notes, the value
41 of matter is achieved not just through recognition of a substance’s location in space but
42 through the ways in which it persists, seeps into cracks, and transforms itself, all the
43 whilst insinuating its material properties into the infrastructures and institutions that are
44 established to enable the reproduction of volume as territory.
45
46
47
48
49
50
51
52

53 The materiality of water, and especially sea water, is particularly evocative of
54 these differences that emerge when we think of territory as volume. As Virilio notes,
55
56
57
58
59
60

1
2
3 what might first appear as a horizontal, still, and empty plane (the sea), can, through
4 perspective, proximity, and angles, become fully spherical or voluminous:
5
6
7

8
9 The expanse of the oceanic horizon was truly surprising: could such a vast space
10 be void of the slightest clutter? Here was the real surprise: in length, breadth, and
11 depth the oceanic landscape had been wiped clean. Even the sky was divided up
12 by clouds, but the sea seemed empty in contrast. From such a distance there was
13 no way of determining anything like foam movement ... It was high noon, and
14 luminous verticality and liquid horizontality composed a surprising climate.
15
16 Advancing in the midst of houses with gaping windows, I was anxious to be done
17 with the obstacles between myself and the Atlantic horizon; in fact I was anxious
18 to set foot on my first beach. As I approached Ocean Boulevard, the water level
19 began to rise between the pines and the villas; the ocean was getting larger, taking
20 up more and more space in my angle of vision. Finally, while crossing the avenue
21 parallel to the shore, the earth line seemed to have plunged into the undertow,
22 leaving everything smooth, no waves and little noise. Yet another element was
23 here before me: the hydrosphere. (Virilio, 1994: 10)
24
25
26
27
28
29
30
31
32
33
34

35 **Volume in the Hydrosphere**

36
37 Water is simultaneously encountered as a depth and as a surface, as a set of fixed
38 locations but also as an ungraspable space that is continually being reproduced by mobile
39 molecules; water has a taken-for-granted materiality (liquidity, or wetness) but it is also
40 just one of three physical states that exist in continual interchange (the other two being
41 ice and vapour). Each of these properties can be ascribed to land as well (land too has
42 depth, underlying mobility, and transformation across physical states) but in water these
43 properties are distinct in the speed and rhythm of mobility, the persistent ease of
44 transformation, and the enclosing materiality of depth. Thus, it would seem that water
45 provides a fertile environment for rethinking the ways in which our political geographies
46 emerge from – and impose themselves on – a dynamic, voluminous materiality.
47
48
49
50
51
52
53
54

55 Thinking of the sea as a space of volume, through a wet ontology, enables us to
56 recognise that the form of water opens new territories of control and conflict. Whilst the
57
58
59
60

1
2
3 legal control over seas and oceans has been much attended to, in historical and
4 contemporary contexts (notably, see Benton, 2010; Nyman, 2013; Steinberg, 2001),
5 apprehending its territory as volume presents new discussions. No longer are struggles
6 for space and resources fought on a planar level, relating to the protection of coasts
7 through the security of flat, surface-level sea-territory. Rather contestation has depth. The
8 source of conflict is ever moving and impacted by the movement surrounding it (be it
9 fish, oil, silt, or water molecules themselves). As Bear and Eden (2008) explore in their
10 discussion of fishery certification schemes, the liquidity of the sea complicates control.
11 Fishery certification zones are mapped, rendering the sea a flat space of areal dimensions.
12 Yet these divisions fail to capture the mobility of either the water or the fish, and they
13 reflect our inability to fully comprehend either in its essential mobility. Even attempts at
14 mapping vertically fail. The drawing of lines through water in an attempt to constitute
15 levels of legal authority fails to account for the dynamic fluidity of the various elements
16 that constitute the marine assemblage.
17

18
19 As Bear and Eden write:
20

21
22 Straight lines and 90° angles ... bear little relation to the coastline, the sea bed, the
23 distribution and movement of fish or the fluidity of water itself. These lines
24 strictly define the areas in which fishing has been certified as sustainable. But
25 how far can ... strict cartographic boundaries deal with the essential fluidity of
26 seas and oceans? (Bear & Eden, 2008: 488)
27

28
29 In his discussion of the processes of cartopolitical ontogenesis, by which notions of
30 territory as calculable space are brought to the Arctic seabed, Jeppe Strandsbjerg (2012)
31 makes a similar point. This is also attended to by Steinberg in his consideration of the
32 complexities of oceanic governance (1999, 2011c) in studies of marine zonation from the
33 15th century Treaty of Tordesillas through to the legal fictions that failed to contain
34 pollution from the Deepwater Horizon oil well or rationalise response to it. For
35 Strandsbjerg and Steinberg, as for Bear and Eden, mapping at sea brings a cartographic
36 logic of stasis and control, points and lines, to an ocean whose biogeophysical properties
37 (mobile fish for Bear and Eden, unsurveyed Arctic seabed for Strandsbjerg, water and
38
39
40
41
42
43
44
45
46
47
48
49
50
51
52
53
54
55
56
57
58
59
60

1
2
3 hydrocarbon molecules for Steinberg) are resistant to a terrestrial ontology of bounded
4 zones and emplaced points of power/knowledge.
5
6

7 Implicit in these histories of marine policy initiatives is that social forces
8 attempting to mark, control, and contain territory in Virilio's "hydrosphere" have had to
9 adapt to the ocean's voluminous form. Bear and Eden note that the certification of fish
10 stocks has emerged as a fluid process, open to change and geared into the networks of
11 relationality that shape the territory, in turn reflecting the mobile, shifting, liquid qualities
12 of water and its non-human inhabitants, whilst Strandsbjerg and Steinberg both note the
13 unusual efforts at cooperation that have been occurring among states that are usually cast
14 as competitors in maritime space (e.g. cooperation by the United States and Canada and
15 Denmark and Canada in seabed mapping, and between the United States and Cuba in oil
16 spill monitoring and hazard preparedness). The fluid unknowability of the ocean
17 generates lines of *connection* that cut through classic geopolitical lines of *division*, much
18 as the ocean similarly facilitates both connection and division in economic and cultural
19 spheres (Steinberg, 1999).
20
21
22
23
24
25
26
27
28
29

30 From a related perspective, Gastón Gordillo (forthcoming) attends to the
31 geopolitical sensibility that emerges from the voluminous depth of the seas and oceans.
32 No longer, he contends, is "human control and navigation of ocean space ... restricted to
33 its surface." The character of the sea – its vertical depth, together and coalescing with its
34 movement, its horizontal surface, its angled waves – is a space not moved on, but *through*
35 (as Anim-Addo et al. (2014) note), and also *under*. These spatial dimensions unique to
36 the sea in liquid form create distinct opportunities and complications for the projection of
37 power (see also Peters, 2014b). As Gordillo notes, the technological advance of
38 submarines has "penetrated" the surface of the oceans, marking "a fundamental
39 breakthrough in the projective territoriality of ocean space." Once a *terra incognita* of the
40 planet, oceans now (re)present a space that can be occupied, harnessed, and utilised by
41 different actors "in *any* direction" – up or down, ahead or behind, under or over, left or
42 right (Gordillo, forthcoming, emphasis in original).
43
44
45
46
47
48
49
50
51
52

53 Yet volume is not merely encountered, governed, and employed differently in
54 view of the sea. The term volume itself can be challenged further. Volume, in a literal
55 sense, is well suited to describe earthly, grounded territory. If the classic definition of
56
57
58
59
60

1
2
3 territory (*contra* Elden) is that of bounded area, then volume is the amount of space
4 occupied by a three-dimensional object or region, as expressed in cubic units. Volume is
5 the capacity of a container, and the classic “container” of political theory is the state
6 (Giddens, 1985: 120; see also Taylor, 1994).
7
8
9

10 This state ontology, however, is profoundly terrestrial. Whilst boundaries of
11 landed states and places may politically and materially shift and change and, in the
12 process, alter volume, the volume of the sea shifts very differently. On a macro-scale,
13 territorial control of the ocean is dependent on the physical state of its volume. Liquid
14 molecules (the sea as fluid) are looser and held further apart. As a solid (the sea as ice),
15 particles are packed together, closer, containing and constricting volume into a tighter
16 form. Its mass becomes denser (although volume remains technically the same). This
17 change, through the transformation of physical state, impacts directly on the plays of
18 politics that then emerge. As Gerhardt et al. (2010) note, the externalisation of the sea
19 within the modern state system is premised on a perceived “elemental distinction”
20 between solid land and liquid sea. The sea as ice confuses and complicates acts of
21 territorial and sovereign control. We return to this example in our discussion of liquidity,
22 yet it is pertinent to note here that the sea, in comparison with other elements, shifts much
23 more readily – and not just in physical state. Its volume can also shift spatially through
24 the large-scale movements facilitated by tides and by other forces that are both planetary
25 (e.g. winds, jet streams) and extra-planetary (e.g. gravity). The volume of water moves
26 and as such its territory and its location cannot be pinned down. This challenges
27 processes of bordering with a particular intensity not found on land.
28
29
30
31
32
33
34
35
36
37
38
39
40
41

42 The ocean is notable as well for the *rapidity* with which it changes states
43 chemically – from vapour to ice – and for its fluid *mobility* (both of which are further
44 discussed below). However, it is in particular its massive *volume* that has the potential to
45 impact “how we think about the politics of space” (Elden, 2013a: 35). The three-
46 dimensional extent of the sea – its immense volume – makes observation and knowledge,
47 and therefore geopolitical control problematic. The search for Malaysia Airlines flight
48 MH370 (still ongoing, at the time of this writing) demonstrates this point. Whilst the
49 vertical nature of the ocean has confounded both direct visual observation and satellite
50 surveillance, it has been the ocean’s *volume* – that is its existence as a hydrodynamic
51
52
53
54
55
56
57
58
59
60

1
2
3 arena in which waves (of water) restrict investigators' ability to observe the reflection of
4 other waves (of light and sound) – that ultimately, is making surveillance, and, more
5 generally, governance, so challenging (see Peters, 2014b; Peters & Steinberg,
6 forthcoming; but for a contrasting interpretation see Steinberg, 2014).
7
8
9

10 In various frames then, the sea is a fruitful space for revisioning volume and
11 subsequent geopolitical order, offering a different lens for pushing understandings of
12 space and power in new directions. It is also a useful space for reconceptualising and
13 ungrounding notions of time.
14
15
16
17

18 19 **Matter and Time**

20 An understanding of territory that engages the dynamic materiality of Earth would seem
21 to be particularly appropriate for understanding geopolitics in the context of
22 anthropogenic environmental change, and indeed Elden's work on volume looms large in
23 Simon Dalby's key intervention on the geopolitics of the Anthropocene (Dalby, 2013; see
24 also Elden, 2013d). We, however, are sceptical of this approach. Although the turn to
25 understanding the geopolitics of the Anthropocene shifts the meaning of "Geo" from
26 "global" to "Earth," the "Earth" that emerges is one of geology, not geophysics. This is
27 more than a semantic distinction. Geology is a science of strata: Both time and the
28 verticality of Earth are divided into distinct layers; the latest layer – the Anthropocene –
29 is yet to emerge as a geologic (i.e. subsurface) stratum but, when this happens, it will
30 reflect human-induced changes that are already apparent on the surface.
31
32
33
34
35
36
37
38
39

40 This is a very different underlying geophysicality than the dynamic materiality of
41 incessant movement and transformation that we have discussed above. Instead of
42 indicating a world of perpetual immanence, the "Geo" in geology points to a material
43 world of stable ontologies that persists in spite of transformations within either the
44 geophysical or social domains (Clark, 2010). Moreover, such conceptualisations are
45 reliant on a linear trajectory of time that stabilises history into material strata and
46 immaterial epochs that can be neatly bordered, bounded, and contained – marking one
47 material layer and social era from another. Implicit in the idea of "Geo" as "Earth" when
48 periodised through concepts like the Anthropocene is the notion of a solid, grounded,
49 *earthly* materiality that can be worked on, and with, by humans. Geo/Earth is understood
50
51
52
53
54
55
56
57
58
59
60

1
2
3 as bearing the *imprint* of human action (those same imprints that Schmitt deems
4 impossible on water), marking processual yet stabilised change. As such, notwithstanding
5 the reliance on the concept of “vibrant matter” (J. Bennett, 2010) often utilised by authors
6 grasping the Anthropocene to give agency to more-than-human and non-human actors in
7 shaping society and space (e.g. Clark, 2010; Yusoff, 2013), the matter referenced by
8 those seeking to understand the geopolitics of the Anthropocene tends to lack a certain
9 vibrancy.
10

11
12
13
14
15
16 As an alternative we see greater potential in engaging geophysics not through the
17 linear and lateral narrative of geology but through the complexity-based understandings
18 of chaos-theory-inspired geoscientists, including physical geographers (e.g. Inkpen &
19 Wilson, 2004; Phillips, 2001; Stallins, 2012). This leads us to an ‘assemblage’ approach
20 that presupposes a world of immanence and becoming (see DeLanda, 2006; Deleuze &
21 Guattari, 2004). Such an approach configures a world that is open, porous, mobile, and
22 changing, but concurrently one that can stabilise temporarily. An assemblage is a
23 territorial “whole,” but its territory may be anything – “someone, human or animal,
24 ‘home’”, a nation, an epoch (Deleuze & Guattari, 2004: 504). The formation of that
25 territory is one of emergence. It has no essence, and its trajectory is not linear. Rather, it
26 is formed and re-formed by the elements that add to the assemblage (reterritorialising it)
27 and leave the assemblage (deterritorialising it). Key to an assemblage is that the parts that
28 compose it are heterogeneous and independent, and it is from the *relations* between the
29 parts that the temporary, contingent whole emerges (see B. Anderson & McFarlane,
30 2011; B. Anderson et al., 2012).
31
32
33
34
35
36
37
38
39
40
41

42
43 In understanding the Anthropocene as an assemblage we necessarily move away
44 from understanding “Geo” as “Earth” and instead, heeding Elden’s (2013c) call, attend to
45 a “politics in relation to water, ice, subsoil, and the submarine.” This does not mean an
46 abandonment of time and temporal processes. After all, it is the movement (through
47 space and time) of liquids – seas, rivers, streams, lakes – and also solids (i.e. ice) and
48 gasses (i.e. wind) that deposit materials that form strata, and it is these depositions that
49 ultimately inform the geo-logical, sequential concepts of time that emerge from current
50 studies of the environment. But even as this occurs, resulting in horizontal sheets of
51 materiality, it is the vertical influence of gravity that – over the process of many
52
53
54
55
56
57
58
59
60

1
2
3 thousands of years – compacts the distributed matter into its geophysical form as rock
4 that can be traced and dated.
5
6

7 In other words, it is the chaotic movement and reformation of matter, which is
8 seen most clearly in the churning of the ocean, that both enables and disrupts (or
9 reterritorialises and deterritorialises) earthly striations. Our aim is not to reject notions of
10 time. Indeed, “time is integrally bound up with the physicality of the sea” (Ryan, 2012:
11 12). However, the ocean suggests that we think with a different, non-linear, non-
12 measurable notion of time (Steinberg, forthcoming(a)). As Jessica Lehman notes in
13 response to Dalby, the ocean’s physicality, and its shaping by human influence, “cannot
14 be fully captured by scientific measurements.” Rather, it “contains potential for
15 rethinking histories of land-based governance and conquest...[not least because of] the
16 types of encounters, negotiations, connections, and politics that these volumes engender”
17 (Lehman, 2013b: 52).
18
19
20
21
22
23
24
25

26 We therefore align ourselves with Jason Dittmer’s (2014) call for an
27 understanding of geopolitical assemblages that incorporates the geophysical not as a
28 material foundation but as a series of interwoven and unpredictable dynamic forces. As
29 Andrew Barry (2014) argues, the linear calculative logic of Anthropocene scholars,
30 which divides time into strata, is itself a function of the anthropocenic age, not the means
31 of its diagnosis. We therefore argue for an alternative perspective in which time, as
32 expressed through *assembled* matter, is non-linear and fluctuating, and matter is mutable
33 and leaky – part of a process of on-going re-formation. As Anna Ryan notes, drawing on
34 Rachel Carson (1999), “[In] the time-frame of...shorelines, sea levels and continents...
35 ‘there is no finality, no ultimate and fixed reality – earth becoming as fluid as the sea
36 itself’” (Ryan, 2012: 13).
37
38
39
40
41
42
43
44
45
46

47 **Liquidity**

48 In advocating a political ontology that takes as its starting point flows, circulations, and
49 the destabilising immanence of liquid, we share the critique levelled by Marston et al.
50 (2005) at those who would reduce all global processes to flow. Indeed, a
51 conceptualisation of the world as fundamentally consisting of fluvial social processes, if
52 made without reference to the spaces within which those flows occur, can promote a turn
53
54
55
56
57
58
59
60

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42
43
44
45
46
47
48
49
50
51
52
53
54
55
56
57
58
59
60

away from the material. For example, Manuel Castells' (1996) work on the "space of flows" focuses almost exclusively on infrastructure and nodes and not on what he calls the "first layer": the material surfaces (and volumes) that the flows actually cross. In Castells' vision, the "first layer," unlike the other, urban layers, appears to exist prior to and independent of the flow's dynamism and in a separate sphere of immateriality, what he tellingly calls a "hyperspace of pure circulation" (for further critique, see Steinberg, 2001). An alternative, shifting from the abstract concept of "flow" to the material entity of "water," does not necessarily provide a more nuanced angle. As Marston et al. (2005) note in their critique of Swyngedouw (2004), water is often understood, especially in the urban context, as something that is simply consumed, not produced or encountered, an essence that lies apart from and prior to the "places" within which it is incorporated.

We also distance ourselves from those who reduce the fluidity of the ocean to a dematerialised abstraction (e.g. Irigaray, 1993; see critiques in Helmreich, 2011; Sutherland, 2014). Whilst a central purpose of this article is to think *with* the ocean as a theoretical tool, we do so with particular attention to its materiality, which can never be separated from either the experience of the ocean or the meanings that we attach to oceanic experiences. To return to Serres, the repetitive, but dynamic drone of the ocean is "not a matter of phenomenology [but] a matter of being itself" (Serres, 1996, 13), not a metaphor but a "thing in the world" (Helmreich, 2011; see also Blum, 2010; Steinberg, 2013), a volume of vibrant matter that is enlivened and made forceful through its *relation* with human life (J. Bennett, 2010; Whatmore, 2006).

Thus we propose as a starting point for thinking with water the concept of the dynamic assemblage in which mobile human and non-human (including molecular) elements and affects are not merely passively consumed but imagined, encountered, and produced. Within an assemblage, materiality persists and is re-formed amidst constant processes of "arranging," "gathering," "mixture," and "turbulence" (B. Anderson & Wylie, 2009: 321). For Anderson and Wylie, materiality has *matter*, a vibrancy and vitalism that, to follow Jane Bennett, brings it "alive with movement and with a certain power of expression" (J. Bennett, 2005: 447), creating a productive, if unstable, *frisson* of matter and meaning.

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42
43
44
45
46
47
48
49
50
51
52
53
54
55
56
57
58
59
60

Stephanie Lavau's (2013) analysis of sustainable water management in Australia embodies this "wet ontological" perspective in which flow is, on the one hand, a singular force but, on the other hand, composed of multiple, chaotic processes. For Lavau, water, in both its singular and multiple existences, incorporates and confounds human intervention. In her work, Lavau moves discussions of water flow beyond consumption (although this features) to how different rivers are produced and engaged. Lavau stresses how multiple ontologies of thought can co-exist in management strategies, reflecting water's persistence as a vibrant matter that has agency in its "unruliness, variability, mobility and fluidity" (Lavau, 2013: 3). Thus, from water's stubbornly liquid flow, ontological multiplicity emerges:

An ecological river (as opposed to an irrigated river) is produced in [the] ordering of materially heterogeneous relations, in patterns of association and disassociation, presence and absence ... Recorded as unconstrained variability, river flow is performed as wild. Mapped as breeding cues, nutrient transfer, and migration paths, flow is performed as life-giving ... Legislated as "stressed" and underrepresented in the bulk entitlement, flow is threatened, vulnerable ... *embracing relational materiality leads us to ontological multiplicity, to attending to the different realities that are produced in particular, socio-material orderings.* (Lavau, 2013: 8-9, emphasis in original)

Although Lavau's narrative, like Jon Anderson's (2012) interpretation of the surfed wave, is, at one level, about the materiality of water, it is also about water's immaterial power to shape the way we think about stasis and movement in time and space. This is a perspective that we take to heart when turning to the sea as a site for reinvigorating a discussion of fluidity and connection further still.

To be sure, as Stefan Helmreich reminds us, there are dangers in employing the ocean as a "theory machine." Through focusing on the ocean as a fluvial, dynamic space that exists in opposition to the static categories of land, we may end up fetishising the ocean as a space of "pure" natural processes, seamless transport, or romantic escape, or we may forget the ongoing connections between land and sea that make the sea much of

1
2
3 what it is (Martin, 2013; Spence, 2014; Steinberg, 2008, forthcoming(a), forthcoming(b)).
4
5 It is not the liquidity of flows, in the material sense, that allows us to overcome land-
6
7 based thinking. Indeed, as we have noted, seawater is not always liquid. Rather, our
8
9 theoretical insights emerge from being attentive to how this materiality has itself been
10
11 discursively placed within (and outside) terrestrial ontologies. The ocean's value as a
12
13 "theory machine" lies not in its existence as an object of alterity (whether real or
14
15 imagined) but in the ways in which its materiality intersects with global political
16
17 economies and territories, constructing a "world interior of capital" that both facilitates
18
19 and disrupts the flows that constitute expansive capitalism (Sloterdijk, 2013; see also
20
21 Steinberg, 2009).
22

23 **Churnings, Driftings, and Reborderings**

24
25 Up to this point in this paper, we have stressed how the ocean is both voluminous and
26
27 liquid, and how recognition of these properties and using them to frame the world enables
28
29 us to revisit assumed ontologies of space, time, and mobility. In this final section of the
30
31 paper we take a new cut on the concept of a "wet ontology" by focusing on various
32
33 dimensions of the ocean's *dynamism*.

34
35 Drawing on insights from Lagrangian fluid dynamics, we understand the ocean
36
37 not as a space of discrete points between which objects move but rather as a dynamic
38
39 environment of flows and continual recomposition where, because there is no static
40
41 background, "place" can be understood only in the context of mobility:

42
43 [From] a Lagrangian perspective... movement, instead of being subsequent to
44
45 geography, *is* geography. Oceanographers working from this perspective trace the
46
47 paths of "floaters" that travel in three-dimensional space, with each floater
48
49 representing a particle, the fundamental unit in Lagrangian fluid dynamics.
50
51 Movement is defined by the displacement across space of material characteristics
52
53 within mobile packages, not abstract forces, and these characteristics are known
54
55 only through their mobility (A. Bennett, 2006). In other words, objects come into
56
57 being as they move (or unfold) through space and time. Conversely, space ceases
58
59 to be a stable background but a part of the unfolding. The world is constituted by
60

1
2
3 mobility without reference to any stable grid of places or coordinates. From this
4 perspective, movement is the foundation of geography. (Steinberg, 2013: 160)
5
6
7

8
9 Although this perspective resonates with how Massey (2004) uses the mobility of
10 plate tectonics to destabilise notions of place on land (as well as with Manuel DeLanda's
11 (2002) application of Riemannian differential geometry to instrumentalise
12 Deleuzoguattarian thought; see also Shields, 2013), there are three key differences. One
13 difference is temporal; there is a vast difference between the geological time referenced
14 by Massey (which is removed from human experience and cognition since it is not
15 actually experienced) and the real-time, encountered mobility of the ocean. One can hike
16 on a mountain trail without realising that one is traversing a landform whose existence is
17 the result of tectonic subduction. It is much more difficult to step into the surf without
18 encountering and reflecting on both water's mobility and its depth. The second difference
19 lies in the voluminous verticality of Lagrangian motion, which stands in contrast to the
20 essentially horizontal movement of plates (even if this can lead to vertical phenomena
21 such as subduction and uplift). The final difference is that plates, even amidst their
22 movement, retain an ontological stability in their state of being which contrasts with the
23 continual re-formation of water molecules into both different forms (droplets, streams)
24 and states (ice, vapour).
25
26
27
28
29
30
31
32
33
34
35
36

37 All of these differences are encapsulated in Ryan's description of the specificity
38 of the sea's motion:
39
40
41

42 In this space of the open sea ... the spatial configuration of surface and depth are
43 in constant flux, with one becoming the other in continual intensity of motion.
44 Depth rises to surface only to be returned below once again. Surface is
45 submerged, becoming depth ... this flowing materiality of merging and folding
46 presents the open sea as an elemental experience. (Ryan, 2012: 1)
47
48
49
50
51
52

53 Thus, we see the ocean as a space of *churning*, where, after Anderson (2012), place is
54 provisional and forever being (re-)produced. Echoing our prior critique of geology, as
55 well as Elden's critique of Weizman, it would be a mistake to apply contemporary
56
57
58
59
60

1
2
3 insights on volume and verticality to the ocean in a way that conceptualises it as a space
4 of fixed horizontal strata (e.g. Lin & Schofield, 2014). Of course, legal institutions will
5 always attempt to delimit volumes into strata just as they will always attempt to delimit
6 horizontal spaces into areas (see Bear & Eden, 2008; Peters, 2014; Steinberg, 2011c;
7 Strandsbjerg, 2012). But the nature of territory as a *political* technology means that this
8 process will always be met with a resistance that reflects underlying dynamics that are
9 both social and geophysical.

10
11 Yet churning occurs not just at the level of law and regulation; it also is embodied
12 by individuals in their ocean encounters. We have referred already to Jon Anderson's
13 work on the immanent production of place through surfing, but this can also be seen in
14 the practice of diving. Diving involves a complex mix of, on the one hand, turning place
15 into nothingness as one descends into the light-deprived abyssal zone (Alaimo, 2014),
16 and, on the other hand, turning nothingness into place, as one constructs human and
17 more-than-human relations at various depths that, in turn, make connections through
18 time. The latter practice in particular is illustrated by Stephanie Merchant's (2014)
19 discussion of the embodied sensation of moving *in* a body of motionful water. Her
20 ethnographic accounts alert us to the affects of movement through a material form that
21 challenges our usual elemental enclosure in air. The mass of water creates new sensations
22 of weight and buoyancy. Merchant describes the water as having "overbearing
23 surroundings" through its depth and the motion through it. Moreover, in her analysis of
24 shipwrecks under the sea she presents a churning from present to past, and from above to
25 below, with each dive initiated.

26
27 This reorientation from a world of stable surfaces to one of three-dimensional
28 mobilities does not even require complete immersion. As Jon Anderson elaborates with
29 reference to his experiences kayaking:

30
31 The first thing you sense is your new orientation to the world. I'm now at
32 "ground" level. As adults, when do we ever see the world from this perspective?
33 My familiar compass bearings become disoriented by this straightforward change
34 in vantage point. Re-positioned to the land, I cast myself adrift from it with two
35 simple strokes – left, right. How does this engagement with the sea change my
36
37
38
39
40
41
42
43
44
45
46
47
48
49
50
51
52
53
54
55
56
57
58
59
60

1
2
3 senses? As I'm floating here a child's snow globe comes into my mind. On land,
4 my life is set in such a hemisphere, and I am grounded, in the centre, at the
5 bottom. The ground rarely moves, I take it for granted, and I have floating flakes
6 above me. On the sea it is different. The hemi-sphere is wholed. My "globe" is
7 now a perfect sphere, partially filled with water, and I'm now floating in the
8 middle, with a world around me. I become aware of the world of sky above, and
9 the world of water below. Unlike the ground, the water beneath me isn't static.
10 It's moving ... This morning the surface has small cats paws from the squall
11 across the water, fractal mini waves on the surface, gathering into small waves,
12 which will eventually become a series. Due to this surface movement, even when
13 I do nothing, just sitting here with hands in the water, I move. The boat revolves
14 to face the waves. They lap around me, slowing inching me backwards. I become
15 aware of the easy but strengthening wind ... I'm the join between the sea and sky.
16 My body could become a sail, my paddles too; catching the wind and moving me
17 whether I want to or not. (J. Anderson, 2014: 107-108)

18
19
20
21
22
23
24
25
26
27
28
29
30
31
32 This leads us back to the spherical (see Sloterdijk, 2011) and Elden's (2013a) take on
33 three-dimensional territory (see also Bridge, 2013). Whilst for Elden volume is of note
34 because it *exceeds* the vertical, volume also allows for dimensions and forces that are, in
35 a sense, less-than-vertical. Volumes have the capacity to support mass, and in this sense
36 they take on a horizontal as well as a voluminous dimension. Thus, just as the ocean is a
37 space of churning it is also a space of *drifting*, in which vertical forces get translated into
38 horizontal motions that often supersede both legal logics and human intentions (Peters,
39 2014b; Steinberg, 2011c). Whether resisting, reflecting, or responding to the forces of
40 churning (as well as those of stasis and implacement), drifting is another facet of the
41 ocean that informs a wet ontology (see Peters, forthcoming).

42
43
44
45
46
47
48
49 Finally, a perspective informed by a wet ontology suggests that as we turn our
50 attention to the volumes within which politics is practiced and territory is produced we
51 must continually rethink the borders that we apply to various materialities and their
52 physical states. Grundy-Warr et al. (forthcoming) make this explicit in their application
53 of insights from Elden (2013a) and Dalby (2013) to the Cambodian village of Kampong
54
55
56
57
58
59
60

1
2
3 Phluk that for part of the year is on dry land and for part of the year is a seemingly exotic
4 “water village.” Of course, to the villagers neither environmental condition is considered
5 exceptional. The two physical states are understood as reflecting the “natural” temporal
6 fluctuation of a single place (much as how, within a given twenty-four hours, we accept
7 that a single place undergoes natural fluctuation between day-time and night-time
8 environments). But the village’s temporal rhythms force us to rethink unquestioned
9 understandings of the relationship between land, water, society, and place (as well as the
10 categories of “disaster” and “exceptionality”) and to pay attention to how these
11 relationships are reinscribed through constructions of verticality and notions of volume as
12 they are projected onto space and implemented as territory.
13
14
15
16
17
18
19
20

21 Work on the mobilities and immobilities that occur on ice similarly leads us to
22 consider the changes of elemental state that occur when one adopts a wet ontology that
23 challenges the static notions of extent that underpin an areal perspective on territory. In
24 the Arctic in particular, the fundamental idealised divide between land (which can be
25 transformed into territory) and water (which cannot) that underpins the modern system of
26 territorial state sovereignty has little relation to actual uses of and encounters with space.
27 The phenomenology of sea ice, as a particularly dynamic form of water, simultaneously
28 destabilises conventional understandings of both geopolitics (as areal) and geophysics (as
29 static), contributing to an ontological confusion that underpins much of the ongoing
30 debate over the Arctic’s future (Bravo, 2009; Gerhardt et al., 2012; Steinberg et al.,
31 2014). This example reveals connections between the materiality of the ocean, the
32 practice of ocean encounters, and debates over policies to regulate these encounters: a
33 confluence of materiality, phenomenology, and policy that speaks to the political power
34 of a wet ontology.
35
36
37
38
39
40
41
42
43
44
45
46
47

48 Conclusion

49 We conclude by returning to Carl Schmitt. Even though *The Nomos of the Earth*
50 stresses a fundamental binary opposition between land and water, with only land
51 facilitating the essential processes of territory, the ocean emerges in Schmitt’s writings as
52 a key arena for the formation of the world’s geopolitical ontology in large part because
53 the ocean is, for Schmitt, a space that lacks its *own* politics. In this article, we have
54
55
56
57
58
59
60

1
2
3 suggested that this oceanic *absence* can instead be conceived of as a *presence*, with a
4 *different* politics. This oceanic politics emerges from its materiality as a space of fluidity,
5 volume, emergence, depth, and liquidity, properties that are all at the forefront of debates
6 presently animating a new materialism in cultural and political geography.
7
8
9

10
11 But what might be the nature of this politics that emerges from ocean space? In
12 his work on Zomia, in the highlands of Southeast Asia, James Scott (2011) demonstrates
13 the impacts that geophysical qualities have on the art of governance and the practice of
14 politics. For Scott, the dimensions of space are paramount to political control, and
15 crucially, the avoidance of control. In Zomia where transient but highly productive
16 populations live on the hillsides, above the lowlands of state surveillance, elements of the
17 physical landscape – namely terrain and altitude – contribute to the shape of the political
18 landscape. Scott rejects narratives that describe populations as having been driven
19 upwards from the “civilised” lowlands. Instead, for Scott, the residents have chosen their
20 locations as advantageous for evading governance. The conditions of the highlands
21 produce “frictions” that thwart the effective governance of lowland states (where
22 geopolitical control can spread quickly over flat, easily accessible dimensions of
23 space). Indeed, Scott (2011: 57) suggests that by taking a map (a flat representation of
24 lived, lively, and dynamic space) and tilting it in accordance with the contours that alert
25 us to changes in height and depth we can gain a sense of the challenges faced by those
26 seeking to project power laterally. Altitude, along with other geophysical factors – rivers,
27 marshes, swamps, and so on – are generative of alternative geopolitical arrangements.
28
29
30
31
32
33
34
35
36
37
38
39

40
41 Might the ocean, when understood through a “wet ontology,” generate a “wet”
42 politics similar to the politics of altitude and terrain identified by Scott in Zomia? For
43 Scott, attentiveness to the geophysicality of the hillside produces a radically different
44 interpretation of space, and an alternate understanding of who holds power and how they
45 project and reject it. We suggest in a similar vein that attentiveness to the sea as a space
46 of politics can upend received understandings of political possibilities and limitations.
47 The ocean, as we have argued – through its material re-formation, mobile churning, and
48 non-linear temporality – creates the need for new understandings of mapping and
49 representing; living and knowing; governing and resisting. Like the ocean itself, maritime
50
51
52
53
54
55
56
57
58
59
60

1
2
3 subjects and objects can move across, fold into, and emerge out of water in unrecognised
4 and unanticipated ways.
5
6

7 It is in this context that we advocate thinking from the ocean as a means toward
8 unearthing a material perspective that acknowledges the volumes within which territory
9 is practiced: a world of fluidities where place is forever in-formation and where power is
10 simultaneously projected on, through, in, and about space. A wet ontology can bring
11 geographic theory to the sea, and bring the sea to geographic theory.
12
13
14

15 On the waves there may indeed be “nothing but waves.” But if waves are
16 understood in all their complexity – as forces, as vectors, as assemblages of molecules
17 and meanings, as spaces of periodicity, randomness, instability and transformation, and
18 as volumes (depths) and areas (surfaces) – then waves, and the wet ontology they
19 exemplify, may be exceptionally well suited for understanding the politics of our watery
20 planet.
21
22
23
24
25
26
27

28 **Acknowledgements**

29 This paper has benefited from conversations with Peter Adey, Mark Whitehead, and the
30 participants at presentations sponsored by Landscape Surgery at Royal Holloway,
31 University of London (2013), the Harvard University Graduate School of Design (2014),
32 and the International Studies Association (2014). We are grateful for comments from
33 Gastón Gordillo and Bill Connolly on earlier versions of this manuscript and the
34 thoughtful reviews of the three anonymous referees.
35
36
37
38
39
40
41

42 **References**

- 43 Adey P, 2010, “Vertical security in the megacity” *Theory, Culture and Society* **28** 173-
44 187
45
46 Alaimo S, 2014, “Violet-black”, in *Prismatic Ecology: Ecotheory beyond Green* Ed J
47 Cohen (University of Minnesota Press, Minneapolis) pp 233-251
48
49 Anderson B, McFarlane C, 2011, “Assemblage and geography” *Area* **43** 124-127
50
51 Anderson B, Wylie J, 2009, “On geography and materiality” *Environment and Planning*
52 *A* **41** 318-335
53
54
55
56
57
58
59
60

- 1
2
3 Anderson B, Kearnes M, McFarlane C, Swanton D, 2012, "On assemblages and
4 geography" *Dialogues in Human Geography* **2** 171-189
5
6
7 Anderson J, 2012, "Relational places: the surfed wave as assemblage and convergence"
8
9 *Environment and Planning D: Society & Space* **30** 570-587
10
11 Anderson J, 2014 "What I talk about when I talk about kayaking", in *Water Worlds:*
12 *Human Geographies of the Ocean* Eds. J Anderson, K Peters (Ashgate, Farnham,
13 UK) pp 103-118
14
15 Anim-Addo A, Peters K, Hasty W, 2014, "The mobilities of ships and shipped
16 mobilities" *Mobilities* **9** 337-349
17
18 Bachelard G, 1994 [1942] *Water and Dreams: An Essay on the Imagination of Matter*
19 (Dallas Institute of Humanities and Culture, Dallas)
20
21 Barry A, 2014, "A new geologic epoch? Tracing the political geography of the
22 anthropocene" Lecture given at colloquium at Geographisches Institut, Universität
23 Zürich, April
24
25 Barthes R, 1972 [1957] *Mythologies* (Paladin, London)
26
27 Bear C, Eden S, 2008, "Making space for fish: the regional, network and fluid spaces of
28 fisheries certification" *Social and Cultural Geography* **9** 487-504
29
30 Bennett A, 2006 *Lagrangian Fluid Dynamics* (Cambridge University Press, Cambridge)
31
32 Bennett J, 2005, "The agency of assemblages and the North American blackout" *Public*
33 *Culture* **17** 445-465
34
35 Bennett J, 2010 *Vibrant Matter: A Political Ecology of Things* (Duke University Press,
36 Durham, NC)
37
38 Benton L, 2010 *A Search for Sovereignty: Law and Geography in European Empires,*
39 *1400-1900* (Cambridge University Press, Cambridge).
40
41 Blum H, 2010, "The prospect of oceanic studies" *Proceedings of the Modern Language*
42 *Association* **125** 670-677
43
44 Bravo M, 2009, "Sea ice mapping: ontology, mechanics and human rights at the ice floe
45 edge", in *High Places: Cultural Geographies of Mountains, Ice and Science* Eds.
46 D Cosgrove, V della Dora (I.B. Tauris, London) pp 162-177
47
48 Bridge G, 2013, "Territory, now in 3D!" *Political Geography* **34** 55-57
49
50 Carson R, 1999 [1955] *The Edge of the Sea* (Penguin, London)
51
52
53
54
55
56
57
58
59
60

- 1
2
3 Castells M, 1996 *The Rise of the Network Society* (Blackwell, Oxford)
- 4
5 Clark N, 2010 *Inhuman Nature: Sociable Life on a Dynamic Planet* (Sage, Thousand
6
7 Oaks, CA)
- 8
9 Connery C 1995, "Pacific rim discourse: the US global imaginary in the late Cold War
10
11 years", in *Asia/Pacific as Space of Cultural Production* Eds. R Wilson, A Dirlik
12
13 (Duke University Press, Durham, NC) pp 30-56
- 14
15 Connery C 1996, "The oceanic feeling and the regional imaginary", in *Global/Local:
16
17 Cultural Production and the Transnational Imaginary* Eds. R Wilson, W
18
19 Dissanayake (Duke University Press, Durham, NC) pp 284-311
- 20
21 Dalby S, 2013, "The geopolitics of climate change" *Political Geography* **37** 38-47
- 22
23 DeLanda M, 2002 *Intensive Science and Virtual Philosophy* (Continuum, London)
- 24
25 DeLanda M, 2006 *A New Philosophy of Society: Assemblage Theory and Social
26
27 Complexity* (Continuum, London)
- 28
29 Deleuze G, Guattari F, 2004 [1980] *A Thousand Plateaus: Capitalism and Schizophrenia*
30
31 (University of Minnesota Press, Minneapolis)
- 32
33 Dittmer J, 2014, "Geopolitical assemblages and complexity" *Progress in Human
34
35 Geography* **38** 385-401
- 36
37 Elden S, 2013a, "Secure the volume: vertical geopolitics and the depth of power"
38
39 *Political Geography* **34** 35-51
- 40
41 Elden S, 2013b, "Earth", lecture delivered at the City-State Lexical-Political Workshop,
42
43 Tel Aviv, June, audiorecording available at
44
45 [http://progressivegeographies.files.wordpress.com/2013/06/earth-citystate-
46
47 workshop.mp3](http://progressivegeographies.files.wordpress.com/2013/06/earth-citystate-workshop.mp3)
- 48
49 Elden S, 2013c, "Undermining geopolitics: sea, seabed, ice", lecture delivered at the
50
51 ArcticNet conference, Halifax, NS, December, audiorecording available at
52
53 [http://progressivegeographies.files.wordpress.com/2013/12/arcticnet-
54
55 undermining-geopolitics.mp3](http://progressivegeographies.files.wordpress.com/2013/12/arcticnet-undermining-geopolitics.mp3)
- 56
57 Elden S, 2013d, "Geo-metrics", lecture delivered at the Workshop on Regimes of
58
59 Calculation and Global Governance, Balsillie School of International Affairs,
60
61 Waterloo, ON, October, audiorecording available at

1
2
3 [http://progressivegeographies.files.wordpress.com/2013/10/geo-metrics-talk-at-](http://progressivegeographies.files.wordpress.com/2013/10/geo-metrics-talk-at-balsillie.mp3)
4 [balsillie.mp3](http://progressivegeographies.files.wordpress.com/2013/10/geo-metrics-talk-at-balsillie.mp3)
5
6

7 Gerhardt H, Steinberg P E, Tasch J, Fabiano S, Shields R, 2012, "Contested sovereignty
8 in a changing Arctic" *Annals of the Association of American Geographers* **100**
9 992-1002
10

11 Giddens A, 1985 *The Nation-State and Violence: Volume Two of a Contemporary*
12 *Critique of Historical Materialism* (University of California Press, Berkeley)
13

14 Gordillo G, forthcoming, "The oceanic void: the eternal becoming of liquid space", in
15 *Deleuze and the schizoanalysis of Spatial Power* Ed. R Benarie (Continuum,
16 London)
17

18 Graham S, Hewitt L, 2013, "Getting off the ground: on the politics of urban verticality"
19 *Progress in Human Geography* **37** 72-92
20

21 Grundy-Warr C, Sithirith M, Yong M, forthcoming, "Volumes, fluidity, and flows:
22 rethinking the 'nature' of political geography" *Political Geography*
23

24 Helmreich S, 2009 *Alien Ocean: Anthropological Voyages in Microbial Seas* (University
25 of California Press, Berkeley)
26

27 Helmreich S, 2011, "Nature/culture/seawater" *American Anthropologist* **113** 132-144
28

29 Inkpen R, Wilson G, 2004 *Science, Philosophy, and Physical Geography* (Routledge,
30 London)
31

32 Irigaray L, 1993 [1980] *Marine Lover of Friedrich Nietzsche* (Columbia University Press,
33 New York)
34

35 Jones J P III, Woodward K, Marston S A, 2007, "Situating flatness" *Transactions of the*
36 *Institute of British Geographers* **32** 264-276
37

38 Langewiesche W, 2004 *The Outlaw Sea: Chaos and Crime on the World's Oceans*
39 (Granta Books, London)
40

41 Lavau S, 2013, "Going with the flow: sustainable water management as ontological
42 cleaving" *Environment and Planning D: Society and Space* **31** 416-433
43

44 Lehman J, 2013a, "Relating to the sea: enlivening the ocean as an actor in eastern Sri
45 Lanka" *Environment and Planning D: Society and Space* **31** 485-501
46

47 Lehman J, 2013b, "Volumes beyond volumetrics: A response to Simon Dalby's 'The
48 geopolitics of climate change'" *Political Geography* **37** 51-52
49
50
51
52
53
54
55
56
57
58
59
60

- 1
2
3 Lévi-Strauss C, 1973 [1955] *Tristes Tropiques* (Jonathan Cape, London)
- 4
5 Lin S, Schofield C, 2014, "Lessons from the Bay of Bengal ITLOS case: stepping
6
7 offshore for a 'deeper' maritime political geography" *The Geographical Journal*
8
9 **180** 260-264
- 10
11 Mack J, 2011 *The Sea: A Cultural History* (Reaktion, London)
- 12
13 Marston S A, Jones J P III, Woodward K, 2005, "Human geography without scale"
14
15 *Transactions of the Institute of British Geographers* **30** 416-432
- 16
17 Martin C, 2013, "Shipping container mobilities, seamless compatibility, and the global
18
19 surface of logistical integration" *Environment and Planning A* **45** 1021-1036
- 20
21 Massey D, 2004 *For Space* (Sage, Thousand Oaks, CA)
- 22
23 Mendieta E, 2011, "Land and sea", in *Sovereignty, Spatiality and Carl Schmitt:*
24
25 *Geographies of the Nomos* Ed. S Legg (Routledge, London) pp 260-267
- 26
27 Merchant S, 2014, "Deep ethnography: witnessing the ghosts of SS Thistlegorm", in
28
29 *Water Worlds: Human Geographies of the Ocean* Eds. J Anderson, K Peters
30
31 (Ashgate, Farnham, UK) pp 119-134
- 32
33 Michelet J, 1861 [1861] *The Sea* (Rudd & Carleton, New York)
- 34
35 Nyman E, 2013, "Oceans of conflict? determining potential areas of maritime disputes"
36
37 *SAIS Review of International Affairs* **33** 5-14
- 38
39 Peters K, 2011, "Sinking the radio pirates: exploring British strategies of governance in
40
41 the North Sea, 1964-1991" *Area* **43** 281-287
- 42
43 Peters K, 2012, "Manipulating material hydro-worlds: rethinking human and more-than-
44
45 human relationality through offshore radio piracy" *Environment and Planning A* **44**
46
47 1241-1254
- 48
49 Peters K, 2014a, "Taking more-than-human geographies to sea: ocean natures and
50
51 offshore radio piracy", in *Water Worlds: Human Geographies of the Ocean* Eds. J
52
53 Anderson, K Peters (Ashgate, Farnham, UK) pp 177-191
- 54
55 Peters K, 2014b, "Tracking (im)mobilities at sea: ships, boats and surveillance strategies"
56
57 *Mobilities* **9** 414-431
- 58
59 Peters K, forthcoming, "Drifting: towards mobilities at sea" *Transactions of the Institute*
60
61 *of British Geographers*

- 1
2
3 Peters K, Steinberg P E, forthcoming, "Volume and vision: toward a wet ontology"
4
5 *Harvard Design Magazine*
6
7 Phillips J, 2001, "Human impacts on the environment: unpredictability and the primacy
8
9 of place" *Physical Geography* **22** 321–332
10
11 Raban J, 1999 *Passage to Juneau: A Sea and its Meanings* (Picador, London)
12
13 Ryan A, 2012 *Where Land Meets Sea: Coastal Explorations of Landscape,*
14
15 *Representation and Spatial Experience* (Ashgate, Farnham, UK)
16
17 Schmitt C, 2003 [1950] *The Nomos of the Earth in the International Law of the Jus*
18
19 *Publicum Europaeum* (Telos, New York)
20
21 Schmitt C, 2014 [1942] *Land and Sea*, available at [http://www.counter-](http://www.counter-currents.com/2011/03/carl-schmitts-land-sea-part-1/)
22
23 [currents.com/2011/03/carl-schmitts-land-sea-part-1/](http://www.counter-currents.com/2011/03/carl-schmitts-land-sea-part-1/)
24
25 Scott, J C, 2011, *The Art of Not Being Governed: An Anarchist History of Upland South-*
26
27 *East Asia* (Yale University Press, New Haven)
28
29 Serres M, 1996 [1982] *Genesis* (University of Michigan Press, Ann Arbor)
30
31 Shields R, 2013 *Spatial Questions: Cultural Topologies and Social Spatialisation* (Sage,
32
33 London)
34
35 Sloterdijk P, 2011 [1998] *Bubbles: Spheres I* (Semiotext(e), Los Angeles)
36
37 Sloterdijk P, 2013 [2005] *In the world interior of capital* (Polity, Cambridge)
38
39 Spence E, 2014, "Towards a more-than-sea geography: exploring the relational
40
41 geographies of superrich mobility between sea, superyacht and shore in the Côte
42
43 d'Azur" *Area* **46** 203-209
44
45 Stallins J A, 2012, "Scale, causality, and the new organism-environment interaction"
46
47 *Geoforum* **43** 427-441
48
49 Steinberg P E, 1999, "Lines of division, lines of connection: stewardship in the world-
50
51 ocean" *Geographical Review* **89** 254-264
52
53 Steinberg P E, 2001 *The Social Construction of the Ocean* (Cambridge University Press,
54
55 Cambridge)
56
57 Steinberg P E, 2008, "It's so easy being green: overuse, underexposure, and the marine
58
59 environmentalist consensus" *Geography Compass* **2** 2080-2096
60
61 Steinberg P E, 2009, "Sovereignty, territory, and the mapping of mobility: a view from
62
63 the outside" *Annals of the Association of American Geographers* **99** 467-495

- 1
2
3 Steinberg P E, 2011a, "Liquid urbanity: re-engineering the city in a post-terrestrial
4 world", in *Engineering Earth: The Impacts of Mega-Engineering Projects* Ed. S
5 Brunn (Springer, Berlin) pp 2113-2122
6
7
8 Steinberg P E, 2011b, "Free sea", in *Sovereignty, Spatiality and Carl Schmitt:*
9 *Geographies of the Nomos* Ed. S Legg (Routledge, London) pp 268-275
10
11 Steinberg P E, 2011c, "The Deepwater Horizon, the *Mavi Marmara*, and the dynamic
12 zonation of ocean-space" *The Geographical Journal* **177** 12-16
13
14 Steinberg P E, 2013, "Of other seas: metaphors and materialities in maritime regions"
15 *Atlantic Studies* **10** 156-169
16
17 Steinberg P E, 2014, "Volume, depth, and the (in)visibilities of water" blogpost available
18 at [http://philsteinberg.wordpress.com/2014/10/18/volume-depth-and-the-](http://philsteinberg.wordpress.com/2014/10/18/volume-depth-and-the-invisibilities-of-water/)
19 [invisibilities-of-water/](http://philsteinberg.wordpress.com/2014/10/18/volume-depth-and-the-invisibilities-of-water/)
20
21
22 Steinberg P E, forthcoming(a), "Non-linearity in the ocean documentary", in
23 *Documenting World Politics* Eds. R Van Munster, C Sylvest (Routledge, London)
24
25 Steinberg P E, forthcoming(b), "Maritime cargomobilities: the impossibilities of
26 representation", in *Cargomobilities: Moving Materials in a Global Age* Eds. T
27 Birtchnell, S Savitzky, J Urry (Routledge, London)
28
29 Steinberg P E, Nyman E, Caraccioli M J, 2012, "Atlas swam: freedom, capital, and
30 floating sovereignties in the seasteading vision" *Antipode* **44** 1532-1550
31
32 Steinberg P E, Tasch J, Gerhardt H, 2014 *Contesting the Arctic: Politics and Imaginaries*
33 *in the Circumpolar North* (I.B. Tauris, London)
34
35 Strandsbjerg J, 2012, "Cartopolitics, geopolitics and boundaries in the Arctic"
36 *Geopolitics* **17** 818-842
37
38 Sutherland T, 2014, "Intensive mobilities: figurations of the nomad in contemporary
39 theory" *Environment and Planning D: Society & Space* **32** 935-950
40
41 Swyngedouw E, 2004 *Social Power and the Urbanisation of Water: Flows of Power*
42 (Oxford University Press, Oxford)
43
44 Taylor P J, 1994, "The state as container: territoriality in the modern world-system"
45 *Progress in Human Geography* **18** 151-162
46
47 Virilio P, 1994 *Bunker Archaeology* (Princeton University Press, Princeton)
48
49 Weizman E, 2002, "Introduction to the politics of verticality", available at
50
51
52
53
54
55
56
57
58
59
60

1
2
3 http://www.opendemocracy.net/ecology-politicsverticality/article_801.jsp
4

5 Whatmore S, 2006, "Materialist returns: practising cultural geography in and for a more-
6 than-human world" *Cultural Geographies* **13** 600-609
7

8 Yusoff K, 2013, "Geologic life: prehistory, climate, futures in the Anthropocene"
9 *Environment and Planning D: Society and Space* **31** 779-795
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42
43
44
45
46
47
48
49
50
51
52
53
54
55
56
57
58
59
60

For Review Only