BLUE LEGALITIES

The Life & Laws of the Sea

IRUS BRAVERMAN AND
ELIZABETH R. JOHNSON, EDITORS

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Duke University Press Durham and London 2020

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DUKE
UNIVERSITY
PRESS

Printed in the United States of America on acid-free paper ∞
Designed by Courtney L. Baker
Typeset in Garamond Premier Pro and Din
by Westchester Publishing Services

Library of Congress Cataloging-in-Publication Data
Names: Braverman, Irus, [date] editor. | Johnson, Elizabeth R, [date] editor.
Title: Blue legalities : the life and laws of the sea / Irus Braverman and Elizabeth R. Johnson, eds.
Description: Durham : Duke University Press, 2020. | Includes bibliographical references and index.
Identifiers: LCCN 2019013466 (print) | LCCN 2019980792 (ebook)
ISBN 9781478005926 (hardcover)
ISBN 9781478006541 (paperback)
ISBN 9781478007289 (ebook)
Subjects: LCSH: Law of the sea. | Economic zones (Law of the sea) | Global environmental change.
Classification: LCC KZA1145 .B58 2020 (print) | LCC KZA1145 (ebook) | DDC 341.4/5—dc23
LC record available at https://lccn.loc.gov/2019013466
LC ebook record available at https://lccn.loc.gov/2019980792

COVER ART: Oceanographic Museum of Monaco, 2013. Courtesy of The Ocean Agency / XL Catlin Seaview Survey.

IB: For my mentor, colleague,
and friend Guyora Binder

ERJ: For my parents, Joyce and Dan,
whose love of the ocean proved infectious

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Introduction

BLUE LEGALITIES

Governing More-Than-Human Oceans

ELIZABETH R. JOHNSON AND IRUS BRAVERMAN

Law and the Sea: Toward Turbulent Legalities

The surface of the sea has long been viewed as a blank space. As Carl Schmitt famously quipped in 1950, "On the waves, there is nothing but waves" (2003, 43). In the popular imaginary, the oceans continue to be seen as a place outside conventional politics. Futurists and libertarian technophiles envision the sea surface as a frontier upon which new forms of governance and ways of life might flourish. In their depths, the oceans have long been—and largely remain—impenetrable to our bodies and senses. Remotely operated vehicles, like the US National Oceanic and Atmospheric Administration's (NOAA) *Deep Discoverer*, return images of what appears to be a different world altogether. As Stefan Helmreich writes, the oceans are "haunted by the figure of the alien" (2009, xi).

Despite (or precisely because of) this haunting, attempts to demystify the oceans are increasingly underway. David Attenborough's famous *Blue Earth* series has introduced millions to the seas and their other-worldly inhabitants, insisting audiences view the oceans not as a world away, but as part of a deeply interconnected, and increasingly fragile, ecological system. Accordingly, the oceans now appear as a bellwether of a coming ecological catastrophe that will affect terrestrial and marine environments alike. With growing regularity, the mainstream media features dramatic images of bleached coral reefs, floating islands of garbage, persistent red tides, and endangered fauna. Frequent stories expose the public to grim statistics on declining fisheries, increasing ocean acidification, and the ubiquitous spread of plastics. As the Australian culture and politics magazine *The Monthly* recently declared, we seem to be witnessing the "end of the oceans" (Bradley 2018, 1).

But just as evidence mounts that marine ecologies are facing collapse, the ocean is also becoming a new frontier for resource extraction and economic expansion. In fact, growing the "blue economy" has become a central component of national and regional strategies in coastal states around the world. Such strategies incorporate an increasing number of conventional and renewable resources, deep-sea mineral mining (Katherine G. Sammler and Susan Reid, this volume), biopharmaceutical production (Helmreich 2009), wind and wave energy (Stefan Helmreich, this volume), dredging sand to create land for real estate and state expansion (Jennifer L. Gaynor, this volume), and the cultivation of algae biofuels (Amy Braun, this volume). Across these diverse sectors, ocean environments appear not as a limit to continued expansion, but as a promising site of endless, and highly profitable, economic production (Patil et al. 2016).

Blue Legalities appears amid this move toward a blue economy. It joins a wave of scholarship in the social sciences and humanities that responds to, and corresponds with, these transformations, newly heralded under the banners of blue humanities (Gillis 2013; Mentz 2009) and critical ocean studies (DeLoughrey 2017; Ingersoll 2016). Drawing on environmental humanities and new materialisms, this novel scholarship grapples with the tensions that surround the more-than-human ocean. This work includes Philip E. Steinberg's and Kimberley Peters's extensive writing on marine geographies (Steinberg 2001, 2011; Steinberg and Peters 2015), Stefan Helmreich's *Alien Ocean* (2009), the edited volume *Thinking with Water* (Chen, MacLeod, and Neimanis 2013), Zoe Todd's writing on fish and Indigeneity (2014), Elizabeth DeLoughrey's work on postcolonial literature and the oceans (2007, 2015), Stacy Alaimo's *Exposed* (2016), Karin Amimoto Ingersoll's *Waves of Knowing* (2016), and Irus Braverman's *Coral Whisperers* (2018). Collectively, this scholarship draws attention to the spaces, histories, and lives of the sea. More critically, however, it interrogates what we think we know—and what we don't know—about oceans, challenging strongly held assumptions about our earthly planet and ourselves. It is an ethical and politically engaged literature that demands we rethink our patterns of life on, and with, the seas.

Blue Legalities is inspired by this emerging literature about oceans and their inhabitants, often referred to as the "blue turn." But as compelling as this blue turn has been, we argue here that it has yet to substantively and creatively take up questions of ocean law and governance. Warming temperatures, increased pollution, sea-level rise, ocean acidification, bioharvesting, and deep-sea and sand mining have been raising concerns about long-established assumptions in both national and international law. The rapid technological and ecological changes that have taken place over the past few decades are prompting serious

reconsiderations of how the seas are governed, suggesting an urgent need for more critical attention to the laws of the sea, in their broadest and most pluralistic iterations. *Blue Legalities* offers such an intensified analysis. Specifically, the interdisciplinary contributors of this volume contemplate different ways in which our political frameworks and legal infrastructures have been made, contested, and remade in the oceans.

This goes to highlight one of the primary motivations for this volume: unblackboxing law. Just as science renders its procedures and technical work invisible and neutral, so, too, do legal rules and procedures—such as those related to sovereignty, authority, territory, and jurisdiction—make invisible certain ideological assumptions and obscure the labor undertaken for their construction. And just as the understanding of science should not be the domain of scientists alone and should involve a critical stance toward these practices, the study of law, too, should not be confined to lawyers and legal scholars. Accordingly, the contributors to this volume consider law from different academic backgrounds, including geography, anthropology, law, political science, history, gender studies, English, and environmental studies. We collectively draw upon these transdisciplinary trajectories to think critically about ocean law, thus contesting the hegemony of legal experts in this regard.

There is already a steady body of scholarship about ocean law. However, this scholarship has mostly been confined to a positivistic analysis of state laws and international treatises that pertain to the sea. Indeed, much has been written about ocean law with a capital *L*—namely, the formal statutes, regulations, case law, and international treaties that govern the seas and their inhabitants (see, e.g., Bishara 2017; Craig 2012; Harrison 2011; Nyman 2013; Ranganathan 2016; Scheiber and Paik 2013; Stephens and VanderZwaag 2014; Tanaka 2008). In most of it, the oceans and their inhabitants appear to be passive to the legal infrastructures imposed upon them. While we recognize that formal laws and administrative bodies are important and prevalent and should not be ignored as such, we are not concerned only with law's official and binding articulations. Instead, we follow in the wake of other legal scholars who have been pursuing questions around the constitution of legalities in terrestrial contexts to argue that the law permeates our understandings of space and matter. We then apply this argument beyond the terrestrial environments to engage with the vexing problems associated with the ocean's watery worlds.

By turning toward the relationship between governance and the life of ecological networks, this volume joins a growing literature on more-than-human legalities. Drawing in particular on Anna Grear's work on law and the Anthropocene (2015), Andreas Philippopoulos-Mihalopoulos's writing on nonhuman

materialities (2016a, 2016b), Irus Braverman's explorations of nonhuman legalities (2015; 2016; 2018b), and Alain Pottage's explorations of materiality in the biosciences (2012; Pottage and Marris 2012), this volume focuses attention on the microscale questions concerning ocean law and its biopolitical enframings. Rather than start with an assumption of law as a prediscursive entity, we follow Pottage's lead to consider the seas themselves and, interconnected to that exploration, to also study various laws as socio-scientific, heterogeneous, and material phenomena. Like much of the literature on the blue turn in the social sciences and humanities, this body of legal scholarship, too, has been influenced by science and technology studies and new materialisms. Contributors to this volume apply these rich insights to consider the ordinary and extraordinary projects of governing oceans.

The volume's chapters are grounded in a careful empirical analysis that spans historical time periods and geographic locations. The contributors emphasize the extent to which soft standards, temporal imaginaries, and scientific guidelines govern various aspects of ocean life as well as how they prescribe and regulate the everyday practices of scientists, managers, and other actors who operate in and impact this space. Whereas traditionally not perceived as legal actors per se, following the practices of these various experts in fact reveals an entire new world of varied and plural laws. At the same time, we also consider the connections as well as the frictions that emerge where systems of governance interact with complex geophysical, ecological, economic, and technological processes. Such a broader and more relational understanding of legalities makes space for critical inquiries. Some of the central questions that emerge from this more relational understanding include: How are existing systems of governance adjusting to the abrupt and radical changes that threaten the health of the oceans? And how might thinking with the seas and their inhabitants engender opportunities for the contestation and transformation of ocean governance?

This volume's interdisciplinary contributors present varied responses to these questions. Neither univocal nor singular, these responses demonstrate that blue legalities are not of one ocean, nor of one law; instead, they are made up of the multiple and messy registers through which we engage the seas. Such legalities of the seas evince what Stephanie Lavau has referred to in the context of fresh water governance as a "multiple reality" that hangs together in "untidy entanglement[s]" (2013, 428). We emphasize the vast and unusual challenges associated with regulating this multiple and fluid reality as it manifests in the spaces, matters, and lives of the sea.

Alongside their messiness and multiplicity, oceans are also dynamic and unstable. Steinberg and Peters write that the seas are a "space of churning" (2015,

258). Amid "processes of 'arranging,' 'gathering,' 'mixture,' and 'turbulence,'" the oceans exist in a near constant state of re-formation (256). This volume brings the churn of this reality to light by showing how, from the turbulence of thinking with ocean legalities, possibilities for more plural relations between time, place, and law may emerge. Accordingly, this introduction explores four central themes: the vast legalities between knowledge and ignorance, temporal governance in the Anthropocene, a sea of lines and laws, and governing with more-than-human sea creatures.

The Vast Legalities between Knowledge and Ignorance

Emergent from our examinations of both ocean Law and its laws—namely, of the macro, as well as the micro, scales of law—is the enhanced reliance of these forms of governance on scientists and scientific discourse. The relationship between knowledge, imagination, and ignorance finds a fruitful substrate in the sea. Long held in the deep, matter and fantasies resurface in legal and scientific accounts of maritime spaces. This collection carefully unravels the coproduction of ocean matter, scientific knowledge, and legislative classifications and enframings.

The oceans have historically been characterized by inaccessibility and indeterminacy. For centuries, much of this space was mostly unknown. Cartographers of the fifteenth and sixteenth centuries made up for the absence of knowledge by filling the seemingly blank spaces with fantastical monsters and mermen. Today, ignorance remains central to the seas' legalities. In the legal literature, the opacity of the oceans is most often understood to incapacitate managers of marine resources or conservationists who seek to curb pollution and battle other perils (Charles 1998; De Wolff 2017). According to many scholars, scientists, and policy makers, the proper government of ocean resources requires the management, and even the excision, of ignorance (see, e.g., Pauly 2013). This, precisely, is how the scientists in Jessica Lehman's chapter, "The Technopolitics of Ocean Sensing," approach the acquisition of marine data. Imagining the sea as a "borderless space" and as the object of a global science that could "benefit all of humanity," these scientists have released thousands of robotic devices into both national and international waters. Meant to facilitate better governance through obtaining more complete data, autonomous underwater robots like Argo floats collect "real-time" readings on temperature, salinity, and movement of the planetary ocean.

These attempts to eradicate ignorance are undergirded by the assumption that knowledge production takes place outside and before the law. Indeed, scientific knowledge is typically considered as preceding the law and as providing

the foundation for legal inscription. But, of course, scientific and legal practices are deeply entangled. This volume's contributions show how attempts to manage, harness, and govern oceans also shape ontological and epistemological claims—what Sheila Jasanoff refers to as the "co-production" of scientific knowledge practices and law. She writes that "the law is now an inescapable feature of the conditioning environment that produces socially embedded . . . science" (2008, 762). How we come to know the oceans and their inhabitants as objects of study thus neither precedes nor merely services the law. Rather, scientists produce knowledge through legal systems and via governmental frameworks. At the same time, techno-physical and scientific practices also shape regulatory and administrative systems. As Lehman shows, the widespread use of autonomous robots both contests and reshapes legal infrastructures. Specifically, their use imposes a universal regulation of the seas, thereby challenging the longstanding sovereign control of nation-states over their territorial waters.

Alongside the efforts to acquire ever greater repositories of knowledge that would eliminate the unknown, blue legalities are also shaped by what Robert Proctor and Londa Schiebinger call "agnotology": the production of ignorance (2008). In paying attention to the ways that scientific and legal frameworks are imbricated, this volume's contributors highlight how not only determinacies, but also indeterminacies, are coproduced and even exacerbated to make ocean spaces more manageable. In other words, the *un*productive and *counter*productive aspects of knowledge are made to matter for ocean governance. In some cases, knowledge of the complexities of geophysical and ecological processes in the ocean is ignored, overwritten, or willfully avoided to better administer the seas.

Stefan Helmreich makes just that point in his contribution to this volume, which focuses on the controversy surrounding the attempted building of a seawall around an Irish golf course owned by US president Donald Trump. While his permit proposal references scientific data that links sea-level rise to climate change, Trump himself has actively, and notoriously, denied this connection. According to Helmreich, Trump's simultaneous deployment and disavowal of climate science illuminates how "science and law are rhetorically coproduced at one moment and torn asunder at another." In this instance of sovereign claims to space and power, "dissimulation and misdirection" reign.

We find evidence of the important role of ignorance in Holly Jean Buck's chapter as well, where it is precisely the lack of attention to ocean acidification in climate legislation that has enabled the rise of the scientific imaginary of a geoengineered planet. Finally, in Jessica Lehman's account, it is ignorance of the law, rather than ignorance of the sea, that enables the use of autonomous robots and facilitates scientific research. As Astrida Neimanis argues in her chapter in

the context of buried toxic contaminants, the "full knowability" of the sea will always elude us. One of the challenges for blue legalities is figuring out how to insist on accountability and justice in the absence of complete knowledge.

Beyond blurring the boundaries between knowledge and ignorance, the mysterious and seemingly alien nature of the seas also troubles distinctions between matter and fantasy. As Stacy Alaimo writes: "Terrestrial humans have often found it more convenient to imagine that the seas are imaginary than to undertake the scientific, cultural, and political work necessary to trace substantial interconnections between human discourses, human practices, and marine habitats" (2012, 179). Understanding ocean imaginaries is therefore an important undertaking.

In her chapter, "The Sea Wolf and the Sovereign," Stephanie Jones examines how such maritime imaginaries—their symbols, metaphors, and fantasies—have shaped the history and spatial politics of the sea. Taking inspiration from Jacques Derrida's writing on the animal, Jones looks to the figure of the sea wolf, demonstrating how her appearance in the literature configures sovereign power, with its paradigms of legality and illegality. In particular, Jones connects the sea wolf's liminal form of life to human stories about piracy on the high seas. As she argues, such stories have in fact legitimized the sovereign state's foundational relationship to violence.

Knowledge and fantasy blur also in contemporary attempts to legitimize future visions of sovereignty. Elizabeth R. Johnson's chapter, "The Hydra and the Leviathan," shows, accordingly, how the US military channels scientific research to create a future geopolitical sea space that is favorable to US interests. Like the researchers in Lehman's chapter, in this chapter, too, military strategists and the scientist they fund endeavor to know more about what lies beneath the sea surface. But unlike the operators of the Argo floats who use robotic devices to expand scientific knowledge, the military strategists here use these devices to enhance military capacity. These efforts are justified on the back of a geographical imaginary (Gregory 1994) composed of militarized histories, imagined threats, and speculative futures. Dangers that allegedly lurk beneath the oceans' depths haunt this production of cutting-edge weaponry, which gains traction through a combination of advanced material technology and detailed security risk calculations.

Interrogating the interconnections between knowledge, fantasy, and ignorance as well as between fabulous and mundane political practices helps us understand how power is made operative through techno-scientific engagements with the seas. Just as importantly, it also provides a path for challenging intractable—and often deeply unjust—configurations of sovereignty.

Temporal Governance in the Anthropocene

While the US military has been advocating for a less risky sea, many scientists claim that it is human activities that have put the oceans at risk in the first place. In 2004, geologist Will Steffen coined the term "the Great Acceleration" to highlight how human activities, predominantly the global economic system, became the prime drivers of change on earth. The twenty-four graphs he charted to express the acceleration in human activity since the industrial revolution (see, e.g., Steffen et al. 2015) were foundational for the formalization of the Anthropocene concept. According to these graphs, the oceans have been ameliorating climate change, as well as other effects of human activity. Indeed, the International Union for Conservation of Nature (IUCN) established that more than 93 percent of heat captured by greenhouse gases has been absorbed by the oceans since the 1970s. If the oceans were not absorbing this heat, the average global temperatures on land would be far higher—around 122°F—instead of the current average of 59°F (Schlanger 2017).

In performing this ameliorating function, ocean ecologies have become not only an early casualty of the Anthropocene, but also a bellwether of what the future has in store for the rest of the earth. Estimating sea-level rise, scientists predict that the oceans will encroach upon human settlements, flood coastal cities, and shrink continents. Postcolonial scholar Elizabeth DeLoughrey writes in this regard: "If there is any agreement about climate change, it is that our planetary future is becoming more oceanic. . . . Sea level rise is perhaps our greatest sign of planetary change, connecting the activity of the earth's poles with the rest of the terrestrial world, producing a new sense of planetary scale and interconnectedness through the rising of a world ocean" (2015, 353). In his recent book, *The Water Will Come: Rising Seas, Sinking Cities, and the Remaking of the Civilized World*, journalist Jeff Goodell offers, similarly, that "despite international efforts and tireless research, there is no permanent solution—no barriers to erect or walls to build—that will protect us in the end from the drowning of the world as we know it" (2017, back cover).

Catastrophe comes in other forms as well. We are already witnessing the dramatic effects of plastic waste on marine ecosystems as media images of whales, turtles, and albatross with stomachs full of plastics appear with ever greater frequency. In addition to sea-level rise and pollution, scientists worry about what they identify as the "triple threat" to marine ecologies: ocean acidification, ocean warming, and deoxygenation (Rogers and Laffoley 2013). Ocean acidification in particular is often referred to as climate change's "evil twin" (Holly Jean Buck, this volume). Absorbing elevated amounts of carbon dioxide

from the atmosphere, the changing chemistry of the ocean is resulting in a decrease in the rates of calcification by reef organisms and thus in an increase in the dissolution of the reef sediments that form reef structures. Reef disappearance in turn causes an accelerated loss of fish habitat and growing coastal erosion (Bakke 2017, 53–54). Oceanographer Sylvia Earle put it this way: "Now we know: If the ocean is in trouble, so are we. It is time to take care of the ocean as if our lives depend on it, because they do" (2014).

Yet despite the inevitable futures of collapsed fisheries and dead reef-building corals, international climate and biodiversity treaties have largely ignored the scientific evidence on ocean acidification. As Holly Jean Buck shows in this volume, the complexity and relative invisibility of ocean acidification have made this process seem peripheral to the massive anthropogenic changes in the oceans. Moreover, imaginaries of heightened planetary management have boosted scientific investments in geoengineering techniques, thus strengthening narratives that figure climate futures as technologically controllable. These efforts resonate with the "Good Anthropocene" approach adopted by the Breakthrough Institute and other Silicon Valley optimists, in which humans figure as the technologically endowed producers of a well-worked planet (Asafu-Adjaye et al. 2015).

Consistent with the "Good Anthropocene" approach, novel developments in biomedicine and the rise of the blue economy have infused new value to the seas and their inhabitants. Rather than seeing them as a grim casualty of human history, advocates of the blue economy have indeed come to view the oceans as a resource for sustainable technological and biotechnological enhancement (European Commission 2012; Helmreich 2007; Johnson 2016). In her chapter, "Got Algae?," Amy Braun shows how, as land resources dwindle, industrial and venture capitalists harness sea life and matter for food, energy, carbon sequestration, and genetic resources. Utilizing practices of enclosure and privatization—including aquaculture, deep-sea mining, seaweed and algae harvesting, and marine bioprospecting—these entrepreneurs portray oceans as utopian spaces of limitless, yet sustainable, development.

Whether we are hurtling toward catastrophe or toward a technologically endowed utopia, the future that figures in both the Anthropocene and the blue economy literatures follows the modern understanding of time as a linear, secular, and unidimensional passing from past to future. In contrast to these universal accounts of time, many of this volume's chapters reveal the rich polychronic natures of the oceans. In Susan Reid's contribution, for example, the deep, slow time of the seas' geologic and evolutionary pasts calls into question basic assumptions of temporal progression. Specifically, Reid argues that by

encouraging a "mine first, observe and legislate later" approach, UNCLOS's instrumental view of the oceans has enabled deep-sea mining operations. Countering such approaches, she relates to the sea as a "cogenerative, transitional realm, thrumming with material agency and life." Reid thus not only imagines more sensitive and durative parameters of livability, but also shows how we might shift the foundations upon which policies and actions are based. In her words: "At a time when planetary environmental systems are in stress and decline, there is a vital place for new imaginaries with which we might all navigate and transition."

Considering multiple temporal registers that move beyond the linear is crucial for crafting the oceans' new imaginaries. Michel Serres's scholarship on nonlinear topologies is instructive in this context. In an interview with Bruno Latour, Serres compared time to a handkerchief: laid flat, the distances between one point and another can be measured. Crumpled in one's pocket, however, "two distant points suddenly are close, even superimposed" (Serres and Latour 1995, 61). His most evocative passage on nonlinear time references the movement of water: "Beneath the Mirabeau Bridge flows the Seine . . . [But] all the water that passes beneath the Mirabeau Bridge will not necessarily flow out into the English Channel; many little trickles turn back toward Charenton or upstream" (58). For Serres, what we often consider history is not necessarily in the past. Patterns and norms laid down in time can, much like water, circulate in eddies and whirlpools or flow back upstream. As the recent political climate demonstrates, blind faith in temporal and social progress is often erroneous—and dangerous.

Christina Sharpe's *In the Wake* (2016) highlights how such temporal currents are lived in the present. Specifically, Sharpe uses the multiple meanings of the term *wake* to consider how past violence continues to resurface in the lives of African Americans today and how persistent forms of trauma and terror followed slave boats sailing across the Atlantic. The past that concerns Sharpe, in which some lives are designated as ungrievable by law and made unlivable in practice, is in fact never past. Similar to Serres's understanding, in this context, too, the past "reappears, always, to rupture the present" (Sharpe 2016, 9). In the wake, "the semiotics of the slave ship continue: from the forced movements of the enslaved to the forced movements of the migrant and the refugee, to the regulation of Black people in North American streets and neighborhoods, to those ongoing crossings of and drownings in the Mediterranean Sea, to the brutal colonial reimaginings of the slave ship and the ark; to the reappearances of the slave ship in everyday life in the form of the prison, the camp, and the school" (21).

Immigration and asylum policies and legal regimes also formalize and solidify traumatic ocean routes. Following boats that carry migrants across the

Mediterranean and elsewhere, one finds dehumanizing legislation being forged in Europe, in the United States, and in Australia. In their wake, death tolls mount while the lives of survivors are displaced, suspended, and often made unlivable through detention and poverty (Lyons 2018). The connections between ocean and terrestrial policies are clearly visible in the use of offshore detention facilities, such as Australia's Christmas and Nauru Island camps. There, asylum seekers await justice with little recourse to human rights laws (Coddington 2018; Mountz and Loyd 2014; Welch 2014; Zeweri 2017).

Other violent pasts and toxic legacies also threaten to reemerge in the ocean. In Astrida Neimanis's chapter, "Held in Suspense," the potential rupture of past into present haunts contemporary politics around the Baltic Sea. Following World War II, hundreds of thousands of tons of unused chemical warfare agents were dumped into the Gotland Deep. While contemporary legal regimes prohibit such dumping, at the time, this form of waste management was considered a safe and viable solution to the problem of disposing of unused munitions. The sea was viewed as a limitless repository, a blue hole into which unwanted terrestrial things could simply be made to disappear.

But the past has in fact not passed. What was dumped then is now resurfacing. Uncertainties around the severity and timing of the chemicals' reemergence, Neimanis finds, incapacitate legal resources so that matter and law are simultaneously "held in suspense." The problem is not a technical one, she emphasizes; it does not rest in the inability of science or the law to address the waste of the Gotland Deep. It is, rather, one of response-ability (Haraway 2008). The turbulence of ocean histories and materialities thus forces a response to the violence of past, and present, displacements. Recognizing the complexity of our potentially catastrophic ecological futures requires, in Neimanis's words, "that we must find ways to call ourselves to account, to enact an ethics of curiosity and care, to do politics even if we know they are always incomplete." For Neimanis, even such incomplete attempts to alter the ecologically and politically degrading status quo are crucial if we are to work toward social and ecological justice.

A Sea of Lines and Laws

Alongside the temporal distinctions, other turbulent boundaries—such as those between land and sea, water and ice, and atmospheres and waves—threaten to upend the "static and binary divisions that so often characterize legal rhetoric" (Philip E. Steinberg, Berit Kristoffersen, and Kristen L. Shake, this volume). While international law attempts to account for the unique characteristics of the oceans, their fluid properties and countless indeterminacies

have resulted in claims that oceans "resist inscription" (Boucquey et al. 2016, 8). Still, myriad inscriptions—scientific, legal, and cultural—proliferate and overlap across ocean space, establishing, undoing, and redoing its boundaries.

The 1982 UN Convention on the Law of the Seas (UNCLOS) is undoubtedly the most comprehensive contemporary inscription of ocean sovereignty, jurisdiction, and use. UNCLOS is a monumental treaty with 320 articles divided into 17 parts that establish normative concepts, such as the 12-mile territorial sea, the 200-mile Exclusive Economic Zone (EEZ), the high seas, and the seabed and ocean floor beyond national jurisdiction (or "the Area"). Mapping the ocean into these multiple zones and jurisdictions, UNCLOS sketches the political geography of today's oceans and sets up the normative framework that governs it. While it attempts to hold open legal space for oceanic indeterminacies, it simultaneously creates and fixes inscriptions across the seas.

UNCLOS's jurisdictional powers lie in its acknowledgment and ratification by territorial nation-states. In this sense, it is both reified and constrained by the legal and political powers that have created it. Under UNCLOS's jurisdictional matrix, national sovereignty typically diminishes with increasing distance from land. While the nearshore territorial sea confers full national sovereignty over both the ocean's surface and water column and the ocean bed, the EEZ delineates a hybrid bundle of spatial rights and responsibilities farther offshore (Katherine G. Sammler, this volume). In that 200-mile-wide ribbon, coastal states maintain sovereign rights to pelagic and sessile resources while surface waters are international (UNCLOS, Articles 58 and 87). Yet farther offshore, beyond the EEZ, the ocean surface and the water column are referred to as the "high seas." Here, freedom reigns as "No State may validly purport to subject any part of the high seas to its sovereignty" (UNCLOS, Article 89). Meanwhile, any national claims on the seabed beyond the EEZ (i.e., in "the Area") have been categorically invalidated by UNCLOS in an effort to protect it as a "common heritage of mankind" (UNCLOS, Article 136). British geographer Stephen Graham describes this way of governing as the "classical, modern formulation of Euclidean territorial units jostling for space on contiguous maps" (2004, 20).

Further attempting to reinforce UNCLOS's role as protectorate of life, the UN is currently negotiating a new regulatory platform for the deep sea, with special emphasis on marine biodiversity and the expansion of marine-protected areas beyond national jurisdiction (Payne 2017). Issues of conservation in the deep seabed have provoked a crisis in national sovereignty, invoking questions about how to transform a space previously characterized by freedom, with relatively limited regulation, into a space with enhanced protections for sea life and matter.

Notably, the Euclidian demarcation of space was integral to the history of ocean governance well before the establishment of the UN and the ratification of UNCLOS. The tremendous investment by early Western administrations in inscribing the seas is detailed in Zsofia Korosy's chapter, "Whales and the Colonization of the Pacific Ocean." There, she shows how eighteenth-century cartographic techniques demarcated spaces of sovereign legal authority in the seas. Such eighteenth-century renderings of ocean space enabled colonial expansion on land as well. By "allowing both seen and unseen spaces to be conceived as congruent wholes within defined boundaries," Korosy writes, cartographic representations of both sea and land legitimized colonial fantasies about sovereignty over terrestrial areas scarcely known. The violence that followed—perpetrated against ocean-dwelling whales and land-dwelling humans alike—catalyzed new ways of viewing the land as a repository of resources to be extracted, used, and abused with legal authority.

The methods of demarcation and geographical reasoning developed in the eighteenth century are just as central to ocean governance today. In their chapter, "Edges and Flows," Philip E. Steinberg, Berit Kristoffersen, and Kristen L. Shake examine the mapping of Norway's icy northern waters. They describe how locating the ice's edge has become a practice of translating what is fluid and indeterminate into fixed and knowable borders. As Steinberg and his coauthors show, legal reasoning intensifies and reifies cartographic inscriptions by insisting on "stable definitions and fixed distinctions." The project of ocean inscription thus creates, in their words, "a world of lines and laws." By defining the boundary between fluid and solid states, cartographers and legislators have effectively erased the physical indeterminacy of ice from the map, making the Arctic more governable for resource extraction. Just as Korosy's eighteenth-century cartographers produced lines and laws to facilitate the extraction of fuel in the form of whale blubber, the Norwegian government has been remapping its border zone in order to expand oil extraction in the Arctic.

Such practices in lines and laws reveal a mounting tension in ocean governance: on the one hand, the seas are configured as a global common; on the other hand, they are perceived as providing a repository of globally profitable commodities. This tension has long underpinned the establishment and negotiation of marine space and its corresponding legalities (Snyder and St. Martin 2015). Few modern concepts have been as influential in stoking this tension—and for the development of law, political science, economics, or environmental studies in this context—as Garrett Hardin's "Tragedy of the Commons" (1968). Hardin's vision of a depleted commons has dominated legal discussions about how to govern public spaces and has frequently been deployed in the

context of marine resources (mainly fisheries) and marine pollution (Ranganathan 2016). Global contributions to ocean waste and to the spread of microplastics are often considered perfect examples of Hardin's tragedy. But as legal scholar Surabhi Ranganathan notes, conservation efforts that vilified common resource management in the seas have ended up sparking legislation that dispossessed both Indigenous and settler communities from critical resources. In other words, Hardin's concept inadvertently set the stage not for more sustainable management, but for more efficient extraction (Ranganathan 2016; see also Locher 2018; St. Martin 2009).

The tension between resource protection and exploitation underpins many of the legal frameworks for ocean governance. The establishment and expansion of the juridical continental shelf and the EEZ have been viewed as emblematic of this tension. In 1945, former US president Harry Truman tripled the resource claims of the United States, thereby starting the race for sovereign expansion (DeLoughrey 2015, 355). This was one of the first assertions of exclusive jurisdiction beyond the traditional territorial seas. The post-1946 rezoning of the ocean constituted "the most dramatic change to global mapping since the post–World War II era of decolonization" (355). It is no wonder, then, that the postwar ocean zones have been viewed as the ultimate symbol of the twentieth-century neocolonial scramble.

The development of technologies that enabled the exploitation of minerals in the seabed in the 1960s intensified that scramble. Most notable was the newfound ability to mine manganese nodules at depths of over three thousand meters (Harrison 2013, 37). The rise of seabed mining in the twentieth century radically reshaped the ocean: rather than being merely a "navigational surface or fishing commons," the seabed became a constellation of "places for fixed capital investment" (Ranganathan 2019). The efforts to capitalize on minerals and fossil fuels beneath the seabed have been so rapid that they have triggered a legal revolution (Harrison 2013, 37). Ongoing technological advances allow developed countries to excavate the seabed, resulting in what developing countries have often referred to as neocolonial ocean grabs (Pinkerton and Davis 2015; see also Ranganathan 2019). In light of these transformations, it is difficult to view the demarcations established by UNCLOS, and promoted through other cartographic efforts, as fixed and stable. Instead, the oceans have become the latest Wild West—a frontier playground for exertions of national sovereignty and power that extend logics of land into sea.

Beyond this scramble for existing territorial anchors to extend their reach through legislation, nation-states are now also extending the land itself into the ocean, with significant legal implications. Jennifer L. Gaynor's chapter

in this volume shows, accordingly, how increasing state capture and contestations over resource extraction in Southeast Asia have driven island and coastal states to engage in massive terraforming projects. These projects of sand redistribution stretch and transform legal distinctions between land and sea, and international court tribunals are called upon to adjudicate which landforms count as territory, with entitlements over adjacent waters, and which are merely rocks and sand.

Clearly, then, there is much at stake when inscribing boundaries and binaries onto the sea and decisively distinguishing land from water. By historicizing and problematizing legal borders, this volume contributes to the telling of myriad ocean stories with the aim of furthering protective policies. Along these lines, Katherine G. Sammler's chapter, "Kauri and the Whale," studies the controversies over New Zealand's Foreshore and Seabed Act of 2004, which has enabled the extraction of seabed minerals. This legislation has generated much friction between two clashing worldviews: one embracing a Western land/sea binary, the other based in Indigenous Māori traditions that assign holistic customary rights extending from mountains to sea. According to Sammler, Indigenous ontologies provide alternative ways of governing that challenge the essentialism of national sovereignty and that can better accommodate the fluidity of oceans. Instead of seeing the oceans as a fixed Euclidean space within which power is exercised, this worldview ushers in a "wet ontology" that allows for mobility within and between novel jurisdictions (Steinberg and Peters 2015). Such a wet ontology would arguably diversify and expand the potential for "postcapitalist waterworlds," supporting efforts to decolonize the seas (DeLoughrey 2015, 359; see also St. Martin 2009).

Governing with More-Than-Human Sea Creatures

Among the public, calls for the conservation of ocean resources and the rethinking of marine governance are often channeled through considerations of marine life. Orcas, humpbacks, octopuses, and pelagic sea angels are merely a few of the ocean's charismatic creatures who have captured the human imagination. In spite of their charisma, however, the ocean's nonhuman lives have often been neglected by legal scholars and policy makers alike. When considered, they tend to be the passive subjects of conservation management or fisheries regulations, made to live (and die) under legal infrastructures that were typically crafted for the management of terrestrial species. But the inhabitants of ocean space also shape and resist regulatory enframings, thereby sketching and stretching our understandings of laws in unexpected ways.

The vast differences between land and sea animals have been fruitful for scientific and philosophical inquiries. In *Other Minds: The Octopus, the Sea, and the Deep Origins of Consciousness* (2016), Peter Godfrey-Smith examines the evolutionary divergence of humans and octopuses. His work is driven by a curiosity about the startling intelligence of cephalopods—a class of marine mollusks that includes the squids, cuttlefishes, and octopuses—and their development within bodies so unlike our own. In the book, he attunes readers to the unique attributes of these creatures, highlighting communicative capacities and evolutionary histories that are so different from those of vertebrates, yet are undeniable "accomplishments" of life. Cephalopods have long been considered so morphologically and behaviorally divergent from creatures of the terrestrial world that some have even offered that they must hail from another one altogether. In *Octopus: Physiology and Behavior of an Advanced Invertebrate*, Martin Wells contended along these lines that "the octopus is an alien" (1978, 8). In the decades that followed, scientists commenting on the evolutionary oddity of cephalopods have frequently invoked his claim. Most recently, a widely debated article on life's "cosmic origins" dwells on the unique qualities of the octopus's genome as evidence of "unearthly" beginnings (Steele et al. 2018, 12).

We find more of the same fascination with the unearthly in the ways that scientists write about extremophiles. The ubiquitous tardigrade offers a vivid example. This microscopic invertebrate's ability to suspend life by pausing metabolism in unfavorable environments has challenged conventional understandings about the boundary between life and death. Similarly, the tube worms and ghost crabs who live in hydrothermal vents thousands of meters deep and produce energy through chemosynthesis seem entirely unworldly. It is no wonder, then, that even the marine biologists on NOAA's recent *Okeanos Explorer* expedition referred to the unknown creatures they observed on the abyssal plain as "unidentified swimming organisms."

Thinking with marine animals takes us beyond questions of extending existing legal infrastructures into the depths of debates about just ethical frameworks and more expansive conditions of care. A wealth of literature is currently emerging that examines how thinking with animal life might reconfigure our ethical comportment, engendering what Donna Haraway refers to as a stronger sense of "response-ability" (2008). In thinking with animals, Haraway and her interlocutors envision a post-Cartesian world in which subjectivity is neither individual nor autonomous, but rather situated across a shared, multispecies planet.

Queer theorists have also turned to the oceans and their organisms as a resource for thinking beyond and outside the traditional coordinates of being human as heteronormative and gender conforming. Eva Hayward, for example,

has shown how thinking with cup corals and starfish incites us to reconfigure the "meat and meaning" of the body. For Hayward, speaking, writing, and singing of starfish generates an "inter-somaticity" and "a kind of nearness that invokes a voluptuary of trans-speciation, and imagines a co/passionate kind of presence" (2008, 80). Learning with sea organisms, she argues, we might create new "ethics of mattering" (Hayward 2012, 185).

Confronting wet ontologies and epistemologies also reveals that human animals have never been dry—that we are in fact those alien creatures that we see as other. Along these lines, Stacy Alaimo's work considers how thinking and engaging radically different life-forms forces us to think beyond our human exceptionalist tendencies and to recognize that "like our hermaphroditic, aquatic-evolutionary ancestor, we dwell within and as part of a dynamic, intra-active, emergent, material world that demands new forms of ethical thought and practice" (Alaimo 2011, 283). According to Alaimo, thinking with sea creatures may engender unexpected affinities (283; see also Harvell 2016).

Astrid Schrader emphasizes such affinities in her contribution to this collection. Looking at the rhythmic lives of marine microbes, she asserts, we are "haunted" by past generations: the rhythms of dead cyanobacteria colonies govern the metabolism of living populations. Thinking with these populations challenges how we understand the divides between living and dead, between individuals and populations, and among species. For Schrader, haunted microbes reconfigure questions of justice and law, shifting the central discussion from the relation between norms and "forms of life" toward a politics of temporally entangled modes of existences. Drawing on Derridean legal scholar Drucilla Cornell, Schrader thus develops what she calls a "marine microbiopolitics," which works to unseat the primacy of the autonomous liberal humanist subject. Such an unseating of the liberal subject not only undermines the position of the autonomous human in the law; it also shifts the role of science in relation to biopolitics, turning it into a resource for rethinking conceptions of justice.

Accounts of law will inevitably shift when we move away from our anthropocentric bias to more carefully consider less-like-us lives and matter. In her chapter, "*Clupea liberum*," for example, Alison Rieser showcases the largely unknown historical role of the Atlantic herring in the development of the modern state. She argues, in particular, that the herring was central to formative seventeenth-century debates over the Freedom of the Seas principle. This fish's seemingly intentional arrivals and disappearances were part of the oceanic imaginaries of the polities of the North Sea basin, where novel legal institutions were competing to regulate rapidly changing economies and shore up national interests (see also Rieser 2017). With their particular habits and biological

properties, the Atlantic herring thus performed an active role in producing the Freedom of the Seas doctrine, which in turn shaped modern legal regimes that pertain to the seas writ large. Clearly, thinking with marine organisms can challenge our assumptions about the relationship between life and law.

While the herring were central to the constitution of major principles of Western legalities, many other forms of ocean life have been much less visible to the law. Reef-building corals are a good example of the initial blindness, later turned into an ill-fit, between law and various marine forms of life. This ill-fit has become evident from the recent attempts to know and classify marine species for laws that deal with endangered species protection (Braverman 2018a). Trying to determine whether or not they are endangered, legal administrators and conservation managers have debated what is the relevant unit for counting a coral individual: is it the polyp, the colony, or the genotype? As it turns out, each division carries significant problems. The coral scientists and managers soon realized that modern Western laws about endangerment were enacted with tigers, lions, and bears in mind—and not with invertebrates such as corals. Braverman describes, accordingly, how "legal administrators, equipped with words and paper, stretch, bend, and lengthen legal norms to fit the particularities and peculiarities of coral life—thereby breathing life into corals. Their imperative is to make the coral visible to the law, and they have been using the legal and scientific language of endangerment for this purpose" (Braverman 2018a, 183).

Corals have also challenged the definitions of harm and death, which are central to nature protection laws. For example, the term "take" is a core tenet of the US Endangered Species Act of 1973 and intended to prevent any harm to listed species by physical injury. But rather than harming the coral animal, the breaking off (or "fragging") of corals in fact creates new life and is therefore utilized by coral nurseries for restoration purposes (Braverman 2018a, 164). It is no wonder, then, that the plan to list two Caribbean Acropora coral species as endangered triggered a wave of protests among coral scientists and managers alike, much to the bafflement of government administrators, who assumed that these experts would be thrilled with the proposed legal up-list and its enhanced protection (165).

If corals have become the focus of protection through their legal designation as threatened and endangered, Braverman's contribution to this collection reveals those attempts to manage the ocean that focus on legal acts of killing. In particular, she examines the historical and contemporary use of robotic machinery in attempts to "control" the crown-of-thorns starfish outbreaks that have been damaging the Great Barrier Reef. These robotics "make die" as part of a biopolitical gaze that extends beyond human and nonhuman life

to consider machinic ways of seeing and killing. As robots displace humans in marine life management, we find that ways of knowing and governing life are increasingly embedded within technological prosthetics. These prostheses, which have been providing important access to the deep sea, have also become apparatuses of governance that in turn shape this space.

Yet dealing with the major threats to ocean creatures may be beyond the capacity of advanced technologies as well as the scope of national and international laws. Since existing laws are typically restricted to the national scale, conservation managers and policy makers are concerned that they might not be adequate for resolving the global problems of our era. For these and other reasons, legal scholars have argued that "climate change challenges the capacity of law," referring to it as a "super wicked problem" (Weaver and Kysar 2017, 296). Will more plural, dynamic, and planetary legalities be better equipped at protecting existing ecosystems and forms of ocean life from their projected decline?

Final Notes on Turbulences

Like climate change, the governance of the ocean is a wicked problem. But while altering ocean management is absolutely crucial, especially in the face of the growing ecological crises in the Anthropocene, we must at the same time acknowledge that it requires a radical rethinking: both of our existing assumptions and of our existing institutions and regulatory apparatuses. After all, ocean governance is not a managerial or technical problem to be solved through the acquisition of more and better knowledge or through an expansion of existing legal regimes. The unique material and symbolic dynamics of the sea and its inhabitants thus force us to de- and uncenter our systems of governance and our modes of regulation. Put differently, recognizing the fluidity of land and sea requires a reconsideration of the existing institutions, temporal frameworks, and categories with which we engage the oceans, illuminating our responsibilities toward these spaces and to what lies and lives within them.

Existing on the edge of law and haunted by the figure of the alien, the seas have been central to the construction of terrestrial institutions and modes of governance. Reversing the continental gaze into the sea, ocean imaginaries may creep onshore, inspiring openings for flows, transformations, and relationalities. Such wet ontologies and their accompanying wet creatures and structures have already manifested in wet coalitions, resistances, and emancipations on, in, and near the sea (Katherine G. Sammler, this volume; Hadjimichael n.d.; Steinberg and Peters 2015). Specifically, thinking with sea organisms such as the Atlantic herring, whales, crown-of-thorn starfish, green algae, and bioluminescent *Pyrocystis*

fusiformis, as well as with such sea phenomena as ice, waves, buoys, remotely operated vehicles, humanoid robots, and forgotten chemical weapons, invites the crafting of alternative regulatory frameworks that contest the existing linear inscriptions of the sea. In some of these physical and temporal sites, political struggle may lead to more just and ecologically sustainable practices of knowing—to a mode of governing with care. *Blue Legalities* therefore not only points to the myriad ways in which legal structures are adrift at sea but, more importantly, it also hints at the vast opportunities for other legalities—and ways of knowing, understanding, and relating to the world—to emerge.

Acknowledgments

We would like to thank the contributors of this volume for their helpful comments on the introduction. We are also grateful to the Baldy Center for Law & Social Policy for the generous workshop grant that made this book possible.

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