

# Nature/Culture/Seawater

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“In the Maldives, ministers in scuba gear met on the sea bed to draw attention to the dangers of global warming for the island nation.” From *New York Times*, October 17, 2009

On October 17, 2009, fourteen members of the cabinet of the Maldives convened a meeting on the seafloor, twenty feet below the water's surface, to sign a document exhorting nations around the planet to cut carbon dioxide emissions. At an average of just five feet above sea level, many of the 1,192 coral islands of the Maldives are in danger of vanishing beneath the Indian Ocean if climate change unfolds as many scientists predict. The Maldivian meeting, which was dramatically staged with cabinet ministers in full scuba gear, mobilized seawater — in its apparition as what Lévi-Strauss would have called *maleficent water* (against beneficent water, rain water) — as a symbol of drowning<sup>1</sup>. In the idiom of contemporary anthropology, the meeting was a call to recognize that a local “culture” was under threat from a global “nature” transformed by distant and distributed “cultures” of consumption and pollution. Water manifested as a cycling, hybrid substance at once natural and cultural.

That analysis makes the nature/culture duo do a lot of work, work that the pair has been performing for some time, as Marilyn Strathern observes: “western nature-culture constructs ... revolve around the notion that the one domain is open to control or colonization by the other” (1980, p. 181). In this nature/culture spin cycle, water oscillates between natural and cultural stuff, its putative materiality often masking the fact that its fluidity is in part a rhetorical effect of how we think about the time and space of nature and culture in the first place. Nature has been figured as the material out of which culture is made, and culture has been the *cultivated*, with its grounding metaphors land-based — not surprising since the word “culture” has origins in European conceptions of agriculture. Nature lies in wait of cultivation or, sometimes, resists — is constitutively unruly, elusive. As *nature*, water appears as both potentiality of form and uncontainable flux; it moves faster than culture, even as culture seeks to channel its flow toward human aims. As *culture*, water is medium of nutrition, poison, travel, pleasure, danger, a sea of symbols.

How have such conceptions of water been installed and elaborated, particularly in anthropology? With what effects? In what follows, I consider water as a substance and symbol in anthropological theory, tracking how imaginations of water — particularly

seawater, with its potential to be beneficent and/or maleficent — both underwrite and undermine nature-culture parsings. I do so by weaving some history of anthropology together with an ethnographic report on fieldwork I conducted on an oceanographic research vessel in the Sargasso Sea, on a trip to collect and characterize microbes from waters around Bermuda. I then leverage that fieldwork — undertaken in the service of an anthropological study of contemporary marine biology (Helmreich, 2009) — into a wider discussion of water imagery in recent social theory, imagery increasingly mobilized to think about currents, flows, and circulations — tropes ever more common in talk of globalization, which, as I will suggest, we might also call “oceanization.”

As I work through various manifestations of water, I retool historian of science Peter Galison’s notion of a “theory machine” — a thing or practice in the world that stimulates or enables a theoretical formalism or formulation (2003). For Galison, networks of electrocoordinated clocks in turn-of-the-twentieth-century European railway stations aided Albert Einstein’s thinking about simultaneity. We could say that animal husbandry provided a theory machine for Charles Darwin’s account of evolution by natural selection. Closer to the object of this essay, for French physicist Sadi Carnot, *water* was a theory machine; his derivation of the second law of thermodynamics in the 1820s hypothesized “that heat was a kind of fluid which behaved in significant ways like the water whose flow his father had studied in connection with the improvement of water-wheels” (David Knight, personal communication; see Knight, 2009).

How has water operated as a theory machine in anthropology? And how has that machine functioned with respect to nature and culture?

These are outsized questions, and so a caveat is in order: water is not one thing.<sup>2</sup> Assayed in the language of the natural sciences, water’s effects vary depending on its state (solid, liquid, gas), on the scale at which it is assessed (from the molecular to the bulk, in ponds, rivers, lakes, or seas), and on whether it is fresh or salty, still or turbulent, deep or shallow. Assayed in the idiom of the interpretative social sciences, water can be sacred

substance, life, refreshment, contaminant, grave, and so on (see the February 2010 issue of *Anthropology News*, which contains a section on “The Meaning of Water.”). I focus my attention here on seawater.

Anthropologist Veronica Strang in her “Common Senses: Water, Sensory Experience and the Generation of Meaning,” suggests that the variety of meanings that attach to water are fastened to its form: “Water’s diversity is, in some respects, a key to its meanings. Here is an object that is endlessly transmutable, moving readily from one shape to another: from ice to stream, from vapour to rain, from fluid to steam. It has an equally broad range of scales of existence: from droplet to ocean, trickle to flood, cup to lake” (2005, p. 98). Strang suggests that water’s qualities of mutability “are crucial in that they provide a common basis for the construction of meaning” (p. 97). I would diverge from Strang in anchoring cross-cultural meanings of water in water’s protean form. What I find interesting about her argument, instead, is how it functions as a theory machine, positing that formal flexibility in nature determines formal flexibility in culture.<sup>3</sup> I read Strang’s claim as emblematic of a larger turn to “the form of water” (p. 97) in social theory. If, as I will show, the qualities of water in early anthropology and social theory were described impressionistically, even Romantically, then scientific descriptions of the form — molecular and molar — of water (again, particularly seawater) have become increasingly prevalent in thinking about the social, cultural, political, and economic in the contemporary moment. Water has moved from an implicit to an explicit figure for thinking/theorizing, and the implications of that move are part of my concern here. This paper represents some preliminary thoughts.

### **Anthropology’s Oceanic Origin Stories**

In May 2004, I joined microbiologists from the University of Georgia on a ten-day voyage to the Sargasso Sea to sample marine microbial life. To make myself useful, I agreed to do some sampling for MIT microbiologist Penny Chisholm, of seawater containing

*Prochlorococcus*, the smallest and most abundant photosynthetic marine bacterium in the world's oceans. Chisholm and the scientists on the Research Vessel *Endeavor* wanted to learn how fast *Prochlorococcus* reproduced in the open ocean; knowing how quickly this "primary producer" at the base of the food chain used solar energy to multiply and to provide nutrition up a narrowing pyramid of bigger creatures, from ciliates to cetaceans, promised to answer questions about the biological component of earth's climate modulation. More poetically put, such knowledge could track the speed at which *light* gets turned into *life*.

As I followed scientists and their samples around the ship, I watched as small vials of seawater were fed through a device called a *flow cytometer*, an instrument that counts cells in solution to deliver an account of the sorts of microbes present in a given sample. That cell sorting is enabled by firing a laser through sample seawater; because cells contain distinct photosynthetic pigments, they fluoresce distinctly under laser light. The first *Prochlorococcus* strain isolated, in 1988, was called "Little Greens" because its chlorophylls were similar to green algae, absorbing red and violet light, making their structures appear green. Since then, strains of cyanobacteria have been characterized that float at different depths, depending on the level and color of light they prefer.

Learning this, it occurred to me that certain times of day (dawn, noon, dusk, night) might prompt more or less DNA synthesis among strains tuned to different light frequencies. The color of light on seawater might be a qualitative concomitant of a quantitative phenomenon, cell replication. Frequent commentary among scientists on the ship about the color of seawater took on a new cast.

Students of anthropology may know that one origin story for the discipline goes back to Franz Boas's reflections on the color of seawater as a matter decided differently from within distinct cultural epistemologies. Looking back on his 1881 University of Kiel physics-geography dissertation, "Contribution to the Understanding of the Color of Water," Boas wrote,

In preparing my doctor's thesis I had to use photometric methods to compare intensities of light. This led me to consider the quantitative values of sensations. In the course of my investigation I learned to recognize that there are domains of our experience in which the concepts of quantity, of measures that can be added or subtracted like those with which I was accustomed to operate, are not applicable (Boas, 1938, quoted in Stocking, 1974, p. 42).

For Boas, seawater prompted a consideration of the qualitative aspects of seeing (Stocking, 1968, 142). Seawater, seen, became a theory machine for the relativist epistemology for which Boas became known, perhaps fitting since the word *theory* derives from the ancient Greek for “to look on” and “to contemplate.” Alexandra Lorini (1998) takes this argument further, suggesting not only that, “Water in its different forms, and the human activities related to it, was at the center of Boas's geoanthropological descriptions of the Northwest Coast,” but also that the mutability of water — in ice, rivers, rain, fog, and snow — served as a model for Boas's belief in the mutability of cultural practices.<sup>4</sup>

Seawater figured more practically in early anthropology as the medium supporting overseas passages toward sites of ethnographic fieldwork. Gisli Pálsson reminds us that, “As a result of voyages by sea, different and isolated worlds were connected into a global but polarized network of power-relations. Prior to these voyages, the idea of anthropology did not exist. In a very real sense, then, anthropology, the study of humanity, is as much the child of seafaring as of colonialism” (1991, p. xvii). That seafaring saw the sea as a buffer between nation states, as a blank, distancing space (see Steinberg, 2001).<sup>5</sup> Bronislaw Malinowski's famous stay in the Trobriands during World War I resulted from his status as an Austrian citizen permitted to substitute an internment as an enemy alien in Britain with a stay in the Western Pacific; the Trobriands became anthropological islands out of history in part because of an imagination of the sea as an isolating, dissociating space.<sup>6</sup>

As I gazed dissociatively out at the Sargasso Sea, I catalogued color imagery about the sea in scientific writings I had read on the voyage. 1920s British biological oceanographer E. J. Allen called the sea “a blue pasture,” and marine biologist John Teal wrote in his 1970s diary, “The sea was like a prairie with six-foot hills of slightly uneven blue ground stretching on and on under a bright sun.” (Revisiting my own account in *Alien Ocean*, my ethnography of marine microbiology, I see that I describe the sea as “a gorgeous azure”). These aestheticizations of color issue not from some unmediated reflection, but are part of an epistemological tradition — one that we can detect, too, in early anthropology. European anthropologists, on the way to faraway lands, often rhapsodized about the waters over which they passed or amidst which they found themselves during island fieldwork. Malinowski, considering the sea around the Trobriands in *Argonauts of the Western Pacific*, wrote of “intensely blue, clear seas” (p. 49) and, in a lyrical passage, reflected on how “the sea will change its colour once more, become pure blue, and beneath its transparent waters, a marvelous world of multi-colored coral, fish and seaweed will unfold itself” (p. 220). Such reveries appear elsewhere, too. Raymond Firth, in his south Pacific ethnography, *We the Tikopia*, reports that, “The sea in its myriad aspects was a fascinating subject of study to me” (1936, p. 29) and tells us that, in Tikopia, “In the evening the shades of the sea vary from a steely grey where the light is reflected on it through a pale green of the reef waters inshore to a darker green near the reef edge, and an indigo beyond” (p. 29). He follows up with mentions of “the inky black of the sea,” of water with “a brilliant ultramarine shade,” of “a lurid crimson colour on the sea” (p. 29).

Lévi-Strauss’s *Triste Tropiques* is lush with descriptions of color — of South American vegetation, towns, and in a multipage passage, of the shifting boundary between sky and sea at sunset. *Triste Tropiques* offers a full realization of an anthro-Romantic vision of the sea. It also complicates such a vision. While Lévi-Strauss’s meditations on seascapes are painterly, almost Turnerian, his narration of his ocean travels is fraught.<sup>7</sup> He figures the sea as a path toward ethnological research in Brazil in the 1930s and as an

escape route from Vichy France to New York (via Martinique and Puerto Rico) in the 1940s. The sea is passage, first toward exotic anthropological tropics and then away from Nazi encroachment into France. Contemplating his second ocean journey, Lévi-Strauss ponders an ironic fantasy of the sea: “I saw myself going back to my wandering life — but on the oceans this time, sharing the labours and the frugal repasts of a handful of seamen, sailing hither and yon on a clandestine vessel, sleeping on deck, and gaining in health and strength from the day-long nearness of the sea” (p. 25). The spot he gets on the *Captaine Paul Lemerle* sees him joining 350 others on a ship with only two cabins (he shares one of them); most passengers stay in the hold. This is more maritime dystopia than heterotopia; Lévi-Strauss’s attention turns away from the sea to the social world of the boat.

In Malinowski, Firth, and Lévi-Strauss, seawater serves as a symbol of changeable nature, rippling with aesthetic variety and surprise. Water functions not so much as theory machine, but as other to theory: description. One might even say that these anthropologists hold “theory” in abeyance while at sea, only to set it in motion once the ethnographer hits land.<sup>8</sup> Malinowski’s opening tableau in *Argonauts of the Western Pacific* is canonical: “Imagine yourself suddenly set down surrounded by all your gear, alone on a tropical beach close to a native village, while the launch or dinghy which has brought you sails away out of sight” (1922, p. 4). Michael Taussig in *What Color is the Sacred?* (2009) suggests that Malinowski’s fixation on color is at once a conjuring of authorizing detail and a reaching toward the ineffable. Taussig offers this tidbit from Malinowski to illustrate: “During that walk I rested intellectually, perceiving colours and forms like music, without formulating them or transforming them” (quoted in Taussig, 2009, p. 84). Without, that is — in the terms of my analysis — turning them into theory machines.<sup>9</sup>

Aesthetic visions of the color of seawater have by now been polished into tourist trinkets, and like those trinkets can be read as signs of power, nostalgia, desire, or melancholy fantasy. It is worth noting another chromatic of the sea, however: the sea at night. During my time on the *Endeavor*, the nighttime sea took an eerie cast for most of the

scientists and crew. Looking out at the pitch-dark sea, one researcher said to me, “the ocean is foreign to us. It’s like outer space. If you fall overboard, you’re pretty much dead. It’s the closest you can get to outer space without leaving Earth. It’s scary. Being in the open ocean with 4,000 meters of water below you is not the same as having a picnic in a green meadow.” This is another aesthetic reading, to be sure, but it seems to me that it works more directly as a theory machine. I think, for example, of the work of Henk Driessen, in “A Janus-Faced Sea,” in which he uses his ethnography among clandestine trans-Mediterranean migrants to upend dominant tourist visions of the sea; migrant experiences “offer a counterpoint to the romantic image of a benevolent Méditerranée — smooth as glass, bathed in sunshine, blue, green, and turquoise colours and consumed by mass tourists — that has become dominant since the 1950s” (2004, p. 42). Writing that, “Over the past ten years the clandestine, mostly nocturnal, crossing of the Mediterranean has become a dangerous passage into Europe for an increasing number of migrants from African and Asia” (p. 45), Driessen employs a distinction between the daytime and nighttime sea, a sea of tourism versus a sea of dangerous and unpredictable migration, to offer the nocturnal sea and its maleficent waters as a theory machine for understanding dispossession.

My fieldwork at sea inherited a complex history of thinking about the color of seawater. My hope was to ask what *work* the color of seawater did for my scientist interlocutors, to ask how — to flip Boas around — photometric methods might be *vehicles*, not alternatives for intuition and experience.

### **Maritime Anthropologies**

Out at sea, one question that arose in sampling the Sargasso, particularly as we approached Bermuda, concerned the matter of who would own microbes we gathered from the water. Outside national Exclusive Economic Zones — territorial waters extending two hundred miles off the coasts of ocean-fronting nation-states — samples pertain to the “High Seas,” fair game for whomever wishes to gather them. To work in Bermuda’s Exclusive Economic

Zone, the chief scientist on our voyage had received permission from Britain's Foreign and Commonwealth Office, since Bermuda is a dependency of the UK. Since the samples were not headed for a biotech company that might tweak them into profitable products, but were meant as data for biological oceanographers, permission had been granted without much fuss (compare Hayden, 2003b on bioprospecting).

That story contrasts with another that unfolded around an expedition in the Sargasso earlier in 2004, one organized by genome scientist J. Craig Venter, who received permission to sample from the Bermuda Biological Station for Research (BBSR). Shortly after that permission, the Bermudan Ministry of the Environment objected, perhaps because a biotech company, Diversa, had then "patented a fluorescing protein extracted from coral collected under its agreement with the BBSR" (Pottage 2006, p. 152; not insignificantly, the BBSR had signed on for a 1 percent royalty on any profits from the patent). With respect to the Venter case, the BBSR director responded to the Ministry's complaint by saying that, "seawater moves quite fast off Bermuda", and that as a result the collected samples were likely to contain bacteria 'from many Exclusive Economic Zones of many countries in the world', making ownership 'a difficult and complicated issue'" (Pottage 2006, p. 152, references omitted).

Here, seawater is used as a theory machine to warrant a picture of a "nature" that moves too quickly and fluidly to be captured by "culture." While phrased in the up-to-date language of microbial oceanography, the issues here might be usefully compared with those that have long occupied maritime anthropology, namely, how people — particularly fishers — think about property in ocean resources (e.g., McCay and Acheson, 1987; Hersoug, 2005).<sup>10</sup> One objective of such work has been to demonstrate to the policy world the rationality of local knowledges in managing fish stocks, an aim indebted to substantivist economic anthropological approaches. More recently, anthropologists have studied how scientists and technocratic experts are themselves possessed of culturally particular practices around the sea (see *Maritime Studies* on "cyborg fish" [Johnsen, Holm, Sinclair, and

Bavington, 2008] See also Holm, 2003; Kalman and Liceaga Correa, 2009). Maritime anthropology has developed its own traditions and lexicon, and is a fruitful place to look for deployments of seawater as theory machine.<sup>11</sup>

In early articulations, maritime anthropology often projected land-based notions onto seafaring ways of life. Tim Ingold has observed that foraging wild food resources, whether on land or sea, has frequently been represented as akin to activities carried out by non-human animals, whereas agricultural cultivation has been associated with *production*, and by extension, culture (2000, p. 58-62). Early literature dedicated to fishing communities often focused on the “hybrid” represented by peasant fishermen, like those studied by Firth (1946), McGoodwin (1980), and Norr (1980). Only with one foot planted on *terra firma*, it seems, could these fishermen appear as legitimate subjects of study. Indeed, seeing fishing as a kind of hunting or gathering transposed into a different medium (Hewes, 1948), suggests a land-bound vision of the sea.<sup>12</sup>

Treating the sea as a zone to be brought under control using epistemologies of containment used on land has led to what Gisli Pálsson (1998), riffing on Foucault, calls “the birth of the aquarium,” the rise of fishing management regimes that treat the sea as a mammoth aquarium to be brought within the ambit of enclosure. Such enclosure is predicated on a modernist separation of nature and culture, with the sea scripted as a hypernature until now outside culture. Work on Marine Protected Areas (MPAs) considers how scientific administrations of zones of water set aside for preservation trade on such ideas about seascapes, which mostly emanate from Europe. In her ethnography of the making of a Marine Park in Tanzania, Christine Walley (2004) reports that many local people she interviewed did not share the distinction between nature and culture to which transnational marine scientist park consultants were committed and that underwrote their views of proper uses of protected waters (for more on MPAs, see Bjørkan, 2009).

But treating the sea as naturally distinct from the land has its pitfalls, too. One hazard is a treatment of the sea as ontologically fluid and unbounded prior to its enclosure

in “culture.” Even Tim Ingold has fallen into this trap, writing, “As terrestrial mammals, we humans stake out our differences on the land; the sea, however, is a great dissolver — of time, of history, of cultural distinction” (Quoted in Pálsson, 1991, p. x). Geographer Sarah Whatmore makes a similar claim: “the spatial codification of ‘real’ property as a grid-like surface finitely divisible into mutually exclusive estates is both unimaginable and impracticable if we substitute the socio-materialities of land for those of air or water” (2001, p. 60). But these claims are culturally and historically specific. In these assessments, the nature of the sea stands as a limit case of wilderness. If, as Sylvia Yanagisako and Carol Delaney (1995) have suggested, nature is often understood as moral, rational, and designed, this has not applied to the nature of the sea, often read as chaotic, fluid, boundless, more like a watery wilderness than a woody Eden. But this unruly nature is simply the constitutive condition of ruled nature. The wobbliness of water merely underwrites a vision of nature as substrate to culture.

Seeing the sea as the wildest kind of nature there is has a history — one connected to colonial projects of keeping the high seas “free,” outside sovereign territorializations. Western constructions of the “nature” of the sea as “fluid” and “protean” (Raban, 1993) or as “another world... without human culture” (Davis, 1997, p. 100) in contrast to the grounded “culture” of land are not universal (see Orlove, 2002).<sup>13</sup> But they remain powerful, perhaps nowhere so much as in views of ocean resources as “by nature” common.<sup>14</sup> That notion motivated J. Craig Venter’s vision of his sampling of the world’s oceans, which ended up getting him in trouble when he entered Ecuadorian and French Polynesian waters. As he put it at an MIT lecture I attended, “Here, I thought I was just out sailing free in the ocean and somebody’s claimed it all!”

Much of maritime anthropology has sought to demonstrate that how people understand property in ocean resources has more to do with local and translocal systems of management and meaning than with the nature of the substance and space of the sea as such (see McCay and Acheson 1987; Boxburger 1989, Durrenberger and Pálsson 1987; Olson,

1997, Subramanian 2009). In answer to liberal economists who have held that the seas are a common resource that invites overexploitation owing to a presumed natural selfishness that drives human action (this is Hardin, 1968 on the “tragedy of the commons”), maritime anthropologists have documented a variety of norms around marine resource use. Pálsson, quoting Arthur McEvoy, notes that,

Hardin’s thesis of the tragedy of the commons represents a “mythology” of resource use, a model “in narrative form for the genesis and essence of environmental problems.” The claim that access to the ocean is open for everyone in most fishing societies, and that this is the root of all environmental problems, needs to be qualified.... The theory of the tragedy of the commons, then, is an important means for making history, an authoritative claim with a social force of its own, and not simply an attempt to understand the world (1991, p. 154).<sup>15</sup>

And so, scholars detail different genres of sea *tenure*, i.e. “collectively managed informal territorial use rights in a range of fisheries previously regarded as unownable. ... Sea tenure is concerned with ways in which inshore fishermen perceive, name, partition, own and defend local sea space and resources” (Cordell and McKean, 1992, p. 183; see also Olson, 1997). More to the point of the present essay, how that “space” is imagined is relational, not natural. Ajantha Subramanian, in her study of South Indian artisan fishers competing with mechanized trawlers for fish, writes of “fishermen in pursuit of mobile species” (p. 158) who operate at different speeds with respect to the fish they seek. Mobility might not be seen as “in the nature” of ocean fish, so much as a relational category that depends on technologies and speeds of access. Subramanian’s ethnography reveals that the way water operates as a theory machine depends on how quickly one frames it as moving, flowing, with respect to “culture.”<sup>16</sup> To return to the claim made by the Director of the Bermuda Biological Station for Research, that “seawater moves quite fast off Bermuda,” a view from

maritime anthropology can demonstrate that this claim only gets its traction because of a particular calibration of slippery nature to stable culture — at the same time that understanding ownership as “a difficult and complicated issue” because of overlapping sovereignties has the effect of making “culture” spill all over itself.

How else might we think of seawater in this story? Since anthropologists often craft their theory machines out of their informants’/interlocutors’/subjects’ epistemologies and categories, a look at recent ethnography might provide some prompts. Indeed, listening to anthropological theory that explicitly thinks through water can provide a connection to the theme of my third and final section on the turn toward “the form of water” in social theory. So, to take some illustrative examples from recent work:

Bill Maurer (2000), in “A Fish Story,” asks his readers to think of capital as akin to killifish, sea creatures whose embryonic development can halt and recommence, depending on the presence or absence of salt water. Maurer means to trouble stories of steady circulation in tales of global capitalism (see also Hayden, 2003a; and see Tsing, 2000, which employs the image of the channel to articulate thoughts about flow and circulation. See Appadurai, 1996 for more flow). Celia Lowe, in *Wild Profusion*, an analysis of biodiversity practice in Indonesia, asks her readers to take the point of view of Sama fishers in the Togean archipelago off the coast of Sulawesi.<sup>17</sup> She writes that,

For those without intimate experience with the sea, land and water can seem binary entities. The land is start and finish; the sea is a way to get there. The land represents the rich world of human history and domestication; the sea is a temporary pathway. But in many places with watery histories — the Mediterranean, the Pacific Islands, the Netherlands — land and water join together in configuring senses of place (Lowe, 2006, p. 92).

Where the Indonesian state has seen Sama as “extraterrestrial others,” defined as outside institutional frameworks because of their maritime nomadism (see also Chou, 2003), Lowe details how sites like lowland swamps are considered anthropogenic spaces by Sama people. In a passage that resonates with Boas, she writes that “Sama peoples’ nature-making projects cannot be read off of the text of Togeian land or marinescapes, and objects themselves never structure the value, meaning, or form of the observations that allows us to perceived the world around us” (Lowe, 2006, p. 101). In other words, Lowe does and does not use water as theory machine; Sama views structure her own, but she does not generalize them.

In some ways, that approach echoes that of my marine biologist interlocutors. Their views of the sea fastened to actual bodies of water, rather than metaphorical ones. For oceanographers, some of the larger scale properties assigned to water — particularly seawater — are particular to oceans on Earth: currents are motored by wind, modulated by the rotation of the planet, and organized into giant loops of flow called gyres which are bounded by continents; circulations refer to the three-dimensional conveyance of water across hemispheres based on temperature and saltiness; and tides depend on the moon. To point this out is not to set up a grid for policing metaphorical uses of water in social theory, but rather to call attention to the pull between specificity and generality in any theory machine. So, when Gisli Pálsson (personal communication) offers that a maritime anthropology reaching not just across the waters plied by fishers, but also from coastal high-rises and down to the depths of hydrothermal vents renders the space of the maritime newly *volumized*, we must hear this as at once a material and rhetorical claim, one that is interesting in part because of its use of a scientific frame of intelligibility.

### **Oceanization**

Scientists at the University of Georgia gather microbes from Atlantic sites other than the Sargasso Sea. One is the Sapelo Island Microbial Observatory (SIMO), which operates

under the sponsorship of the University of Georgia Marine Institute (UGAMI), and is sited on one of the Sea Islands off the Georgia coast. Sapelo Island is a marshy landmass about the size of Manhattan with a resident population of around seventy, mostly Geechee and Gullah descendants of Africans enslaved and brought to the island in the nineteenth century. Their sense of the sea around them contrasts with the UGA scientists, mostly white, who commute to the island from the mainland, approaching it not so much as a home but as a lab for studying saltmarsh ecologies, not so much as culture but as nature.

I stayed on Sapelo in the community of Hog Hammock at a self-catering guesthouse operated by Cornelia Bailey, of the last generation to be born and schooled on the island. Bailey is at the center of a movement to revitalize Hog Hammock with heritage tourism aimed at people who want to research their Geechee or Gullah roots or learn Sea Island history. Speaking with her and reading her memoir, *God, Dr. Buzzard, and the Bolito Man: A Saltwater Geechee Talks about Life on Sapelo Island, Georgia*, offered an Atlantic different from the one encountered on the *Endeavor*'s trip to the Sargasso Sea. As she wrote in her book, "we were surrounded by water, yes, but the old people were always worried about their children drowning. They'd tell kids, 'Stay out of the water. Stay out of that water. Don't go in that water.' .... It was like they distrusted the water because that water had carried our ancestors here from their home in Africa." With this story, Sapelo becomes visible as a point on the black Atlantic — that analytic and historical unit Paul Gilroy has suggested can link histories previously kept apart by such continental or national terms as African and African American. The distrust of water described by Bailey should remind us of the ocean of the Middle Passage. But as Bailey's designation of herself as a *Saltwater Geechee* suggests, the sea has also been an intimate, positive presence in the black Atlantic, particularly in the Sea Islands. Water is a buffer from mainland politics as well as a baptismal substance associated with swimming escapes from slavery. So, where scientists on Sapelo might — and do — frame the Geechee residents as having a "local" relation to the sea, people like Bailey — who has traveled to Africa in search of ancestral connection

— also conjure a translocal and “global” imagination of the ocean, one connected to what Gilroy writes of as the “rhizomorphic, fractal structure of the transcultural, international formation I call the black Atlantic” (p. 4). Gilroy’s move — one of the first in a trend in historical studies to bring oceans back in as units of cultural analysis (see. e.g., Creighton and Norling, 1996; Finamore, 2004; Klein and Mackenthun, 2004) — operates as a theory machine for renarrating social pasts, presents, and futures.

Work on the black Atlantic, along with recent anthropologies of the Indian Ocean (e.g., Walley, 2004; Ho, 2006) and cultural studies of the Pacific (e.g. Hau’ofa, 1994; Connery, 1995; Subramani, 2001), mark a moment of rethinking the “natures” that subtend “cultures” (often providing a resource for metaphors, too. In Enseng Ho’s ethnography of trans-Indian Ocean kinship connections, he writes that, “Hadramis, especially the sayyids, were a strong current in this restless ocean” [2006, p. 102]). We might think of these works not only as responses to “globalization,” but also as offering a new framework: *oceanization*, a reorientation toward the seas as a translocally connecting substance and symbol.<sup>18</sup> John Kurien (2001) has pitched such an approach in a multinaturalist direction, arguing that we should begin to think about “seacosystems.”

Geographer Nigel Thrift has recently taken this move in an intriguing direction, suggesting that whale communication might be useful as a model for new kinds of human communication across space and scale. Using a sonic idiom, he follows up on research on cetacean bioacoustics to suggest that “What is interesting is the way in which human society is gradually gaining the same kind of capacity as whales: we are increasingly beings who can live with distant others as if they were close to” (2003, p. 143; and see Crawford, 1997). Not Boas’s color of seawater now, but its sound.

The fluidity, literal and otherwise, commonly ascribed to the maritime realm may suggest why watery rhetoric appeals to scholars seeking to develop a new conceptual vocabulary to understand a contemporary moment in which established boundaries have been called into question. The use of maritime examples and analogies by anthropologists

seeking to reconceptualize analysis owes much, of course, to the pioneering work of Braudel (1972) on the Mediterranean as a conceptual unit and to the introduction into anthropology of a world systems approach by those, like Mintz (1985), interested in an Atlantic space crisscrossed by ships, slaves, and sugar. Contemporary scholars have become interested not only in rethinking their models of the world in more fluid, watery terms, however, but also in looking at those things — refugees, nomads, weapons and drugs, fish and other marine life, and so on — that challenge borders precisely because they flow across them. Pamela Ballinger writes, “authors of both popular and scholarly accounts of globalization often employ watery metaphors — of flows, fluidity, circulations — in an effort to capture the increasing unboundedness of movements of capital, communications, and persons. The sea and its qualities thus come to symbolize the growing permeability of borders in a globalizing world, even as the oceans themselves literally represent both medium and site of globalization” (2006, p. 154-155). As I suggested at the beginning of this essay, thinking with watery metaphors has lately become something of a prescriptivist enterprise. We *should* be thinking with water — even oceans — say many theorists.<sup>19</sup> I think we need to think critically about this call.<sup>20</sup>

What kind of oceans are the oceans of new social theory? For some, the ocean is clearly a boundary-blurring body, and in many ways a figure of liberation. Epeli Hau’ofa, of the University of the South Pacific, for example, argues that Europeans have belittled Oceania by construing it as a scattering of tiny islands rather than as a “sea of islands” connected, not divided, by surrounding waters (Hau’ofa 1993; see Sahlins 2000). Hau’ofa uses seawater against the grain of European models of ocean space, leveraging it as a kind of theory machine to rethink connection.<sup>21</sup> For others, the rise of the ocean in social thought represents the return of “capital’s myth element,” the site of unimpeded circulation (Connery, 1995, p. 289). For still others, its liquidity seems to summon up the specter of what Lévi-Strauss would call maleficent water. Sociologist Zygmunt Bauman, for example, worries that “liquid modernity” unmoors people from solid grounds of politics and

identity. “Liquid life,” he writes in *Liquid Times* (2009), is “precarious life.” Bauman attaches his understanding of liquid to natural science, arguing that liquids owe their “remarkable qualities of the fact that their ‘molecules are preserved in an orderly array over only a few molecular diameters’” (p. 1).<sup>22</sup> Philosopher Peter Sloterdijk sees in globalization a shrinking and multiplication of spheres of human action, fusing and fissioning, and he employs the image of “foam” to describe this state of affairs, which he sees as negative. René ten Bos summarizes Sloterdijk’s position: “Politically, foam is uncontrollable and unruly: we live our lives in what can best be described as a morphological anarchy” (2009, p. 85).<sup>23</sup> What I have called, drawing on Strang, the turn to the “form of water” takes shape at a variety of scales, but always with some appeal to the empiricity of water — its geographical facticity as a connecting element for community and commerce, its molecular structure. But these appeals are, of course, strongly loaded with ethical claims (And I’m still thinking about why ethical calls are being phrased in such natural scientific-secular idioms . . . All help welcome!)

If the sea is such a potent material for the formation of theory, it may be because, as Taussig has it, “the sea has disappeared into our heads” (2006, p. 99).<sup>24</sup> Or, better, disappeared from many anthropologists’ and social theorists’ everyday experience. To make one connection back to anthropology: these days, almost no one travels to her or his fieldsite on a long ocean voyage. When the rising of the sea is more in cosmopolitan consciousness than its crossing, there is no time to be between theories.

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<sup>1</sup> “Lévi-Strauss commented ... on the ubiquity of two kinds of water in South American myths, creative water of celestial origin and destructive water of terrestrial origin” (Shanklin, 1989, p. 234).

<sup>2</sup> Neither is anthropology one thing. At a first approximation, national traditions — British, French, American, Japanese, Icelandic, Greek — may inflect sea-watery semiotics differently, in some measure because of distinct maritime histories, distinct relations to fresh and salt water, to rivers, lakes, and oceans — and diverse histories of traveling “overseas” to do anthropology (and see Boskovik, 2008). A topic for a future paper.

<sup>3</sup> Water is a similar theory machine for Mary Douglas in *Purity and Danger*, though it operates in the other direction, from society to nature: “These North California Indians who lived by fishing for salmon in the Klamath river, would seem to have been obsessed by the behaviour of liquids, if their pollution rules can be said to express an obsession. They are careful not to mix good water with bad, not to urinate into rivers, not to mix sea and fresh water, and so on. I insist that these rules cannot imply obsessional neuroses, and they cannot be interpreted unless the fluid formlessness of their highly competitive social life be taken into account” (1966, p. 158). Even as Douglas runs her theory machine the opposite way from Strang, she still uses the “natural” qualities of water to warrant her analysis.

<sup>4</sup> Boas’s reflections on water as an encultured substance contrast with Durkheim, who naturalizes water as the pre-analytic stuff of the world: “Sensual representations are in a perpetual flux, they come after each other like the waves of a river, and even during the time that they last they do not remain the same thing” (Durkheim, 1912/1976, p. 433).

<sup>5</sup> That view, supported by the legal-political making of the High Seas, has sometimes in European philosophy been ratcheted up to a claim about the ontology of the sea itself. Roland Barthes “claimed that the sea ‘bears no message,’ not merely because of its power to reflect rather than contain a gamut of different meanings but because of its seeming absence of evidence” (Batra And Messier, 2008, p. 4). Gaston Bachelard thinks of water as a “substantive nothingness” (quoted in Batra and Messier, 2008, p. 4). Mary Douglas follows Mircea Eliade, from 1958, on water as a symbol of creative formlessness: “In water everything is ‘dissolved’, every ‘form’ is broken up, everything that has happened ceases to exist; nothing that was before remains after immersion in water, not an outline, not a ‘sign’, not an event. Immersion is the equivalent, at the human level, of death at the cosmic level, of the cataclysm (the Flood) which periodically dissolves the world into the primeval ocean. Breaking up all the forms, doing away with the past, water possesses this power of purifying, of regenerating, of giving new birth. . . . Water purifies and regenerates because it nullifies the past, and restores — even if only for a moment — the integrity of the dawn of things” (1966, p. 198-199).

<sup>6</sup> This is R. R. Marrett’s narration in his 1942 memorial on Malinowski: “the War descended upon us, and Malinowski as an Austrian subject, became technically an enemy, and who as such must be interned” (quoted in Kuper 1983, p. 12). Adam Kuper finds the story overdrawn, arguing that, “Malinowski was making the most of an opportunity” (1983, p. 13).

<sup>7</sup> At one point in the book, Lévi-Strauss uses the doldrums — the equatorial ocean zone where breezes fall away — as a metaphor for European encounters with the Americas. He moves here from water to air: “The charcoal skies and louring atmosphere of the doldrums summarize the state of mind in which the Old World first came upon the new one” (p. 78).

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<sup>8</sup> If seawater in the nineteenth century often stood as a feminized sublime, we might also detect a gendered dimension to the making of “theory” as a land-based activity (see Lutz, 1995 on “The Gender of Theory”).

<sup>9</sup> These tales issue from European anthropologies, and one may find different apparitions of the sea in other traditions. So, for example, in the early anthropology of African America, Melville Herskovits (1941) stages the ocean as a space of resistance and of lineage, writing of “salt-water” Negroes — people born in and transported from Africa — as agents of cultural transmission (arguing, along the way, for the survival of “African water deities” in genres of American Christianity that feature baptism). Zora Neale Hurston mobilizes two maritime images in her work, that of the spyglass and the horizon (Jacobs, 1997). Other stories might issue from Japanese ethnology in the 1930s, based at the South Sea Islands Government Office in Micronesia, from the Center for the Black Sea in Turkey, from Indonesian anthropology, and many other traditions (Boskovik, 2008).

<sup>10</sup> Key arguments I develop around maritime anthropology were first crafted in conversation with Pamela Ballinger, in connection with “Recasting Maritime Anthropology,” a panel we convened at the meetings of the American Anthropological Association in 2002. Maritime anthropology has produced ethnographies of fishing communities (e.g., Barth, 1966; Acheson, 1981; 1988, 2003; Butcher, 2004; Ellis, 1986; Firth, 1984; Gatewood, 1984; Gunda, 1984; McCay, 1998; Pálsson, 1988, 1989, 1990, 1991, 1994; Vestergaard 1990), cultural histories of seafaring (e.g., Frake, 1985; Finney, 1994; D’Arcy, 2006), and more recently, in dialogue with cultural studies, critical analyses of coastal recreation and tourism (e.g., Brown, 1997; Davis, 1997; Desmond, 1999; Boissevain and Selwyn, 2004). Scholars have examined the diversity of beliefs about fishing as a symbolic enterprise (e.g., Cordell and Fitzpatrick, 1987; Hoefnagel, 1991), documented how fishing is structured around axes of gender, race, class, indigeneity (e.g. Chapman, 1987; Garrity-Blake, 1994; Kaplan, 1988; Nieuwenhuys, 1989; Volkman, 1994; Gerrard, 2007; Søreng, 2007), and tracked the entanglement of fishing with migration, trade, colonialism, development and environmentalist politics (e.g., Einarsson, 1995; Caulfield, 1997; Bestor, 2001; van Ginkel, 2008). *Maritime Studies*, formerly *Maritime Anthropology*, is the place to look for recent journal articles. For other anthropological writing on water, particularly its symbolism, see Catedra Tomas, 2009; Derne, 1998; Tetart, 1997; Treitler and Midgett, 2007).

<sup>11</sup> An early angle through which seawater was viewed anthropologically was as an element hosting natural resources for human cultural enterprise. Lewis Henry Morgan (1877, p. 10) named fishing as a skill marking humanity’s transition to the Middle Stage of Savagery (his logic being that fish required cooking to eat); his became the first anthropological attempt to fit fishing into accounts of human cultural evolution (Pálsson, 1991, p. 24–34). Mauss (1906) documented coastal lifeways of the Inuit, reporting that Eskimo sociality was organized around summer/winter regimes and that, “If a child is born during the summer, his first meal consists of soup made from some land animal, or from a river fish cooked in fresh water; the ‘winter’ child’s first meal is soup from some sea animal cooked in salt water” (p. 60). For Mauss, Inuit sociality found ordering sustenance in land/water symbolism. Malinowski described fishing magic and inter-island exchange in *Argonauts of the Western Pacific* (1922) and *Coral Gardens and their Magic* (1935), reporting on magic surrounding the launching of canoes, and on Trobriand beliefs about the origin of clans in water-holes (“Not one is on the cultivable land” [p. 63]). Firth (1937, 1946, 1967) discussed fishing among the Tikopia and Malays. Kroeber (1960) examined fishing among Indians of northwestern California.

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<sup>12</sup> Some scholars have argued that the unpredictable nature of fishing leads to a predominance of magical approaches to the sea (see, e.g., Malinowski). In Gupta (2003, p. 27), we read about scholarship on Indian fishers: “Some even go so far as to argue that, even though the agricultural cycle is also associated with rituals, the rituals of fishing communities are imbued with a tone of urgency and depth because of the special vagaries of the ocean.” Here’s a (functionalist) theory machine: oceanic vagaries produce urgency, which in turn produce a certain kind of ritual and deity.

<sup>13</sup> Nor are they monolithic, even within the so-called West, as historians of the modern seaside have demonstrated (Lencek and Bosker, 1998, Löfgren, 1999). Looking at “culture and nature underwater,” to borrow Susan Davis’s (1997, p. 53) phrase, can demonstrate that there are many ways to parse watery realms.

<sup>14</sup> Accounts of water as “naturally” common appear in discussions of the anthropology of irrigation and hydropolitics. So, for example, in Trawick’s discussion of the moral economy of water in an Andean village, he writes that,

The moral economy of water is a product of the unfolding of nature and culture together, of their mutual transformation. It is the outcome of a process whereby the human mind and spirit have expressed themselves within a material reality that is itself partly, but only partly, a social construction. It partly reflects necessity, the impact of material constraints, but it is also, in the final analysis, an expression of certain eternal elements of human desire and intent. In the Andes, this way of life and worldview emerged long ago in the sharing of water, and irrigation has helped to preserve it and hold it fast ever since (p. 374).

<sup>15</sup> Ajantha Subramanian, in her study of Kanyakumari fishers off the coast of southwestern India, explains that common property “is not the same thing as institution-free open access, and to equate the two ignores the presence of regulatory institutions that manage use of collectively shared resources” (p. 157; see also Gupta 2003).

<sup>16</sup> Recent maritime anthropology also contests the idea that the ocean is by its nature dangerous. Penny McCall Howard writes that “historian Marcus Rediker has argued in *Between the Devil and the Deep Blue Sea* (1989) that we distort ‘the reality of life at sea by concentrating on the struggle of man and nature,’ which effectively obscures the role of exploitation and economic pressures in seafarers’ lives” (2010, p. 9).

<sup>17</sup> Also for an Indonesian case, Charles Zerner’s “Sounding the Makassar Strait” (2003) explores how “calls” across water of Mandar fishermen in Sulawesi describe a local soundscape that complicates the flat visual idiom within which state power has sought to contain the sea. Boas’ investigations of the color of seawater just skim the surface of such sensory maritime anthropologies.

<sup>18</sup> Interestingly for my purposes, “oceanization” already has a natural science meaning: “The conversion of continental crust into the much thinner and petrologically distinct oceanic crust” (OED). Torquing this into the frame of a social science theory machine that I see in the making, oceanization might mean the conversion of land-based identities and processes into more fluid oceanic ones.

<sup>19</sup> Perhaps against a tradition of thinking with land: The social contract theories of John Locke and Jean-Jacques Rousseau appeal to a state of nature, a ground upon which to fashion ideas about social relations. At least for Locke and Rousseau, that nature is quite literally a *ground*; their images of the state of nature are all agricultural, terrestrial. John

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Locke's vision of property is sited in allegories of labor invested in undomesticated land, which land he imagines on the model of an uninhabited, untamed "America." Jean-Jacques Rousseau has nations depending on fertility of soil and "fecundity of the women."

<sup>20</sup> One intriguing zone in which such critical rumination is happening is in recent feminist theory. Ann Game writes that "Water metaphors — sea, river, flow, flux, waves — are prevalent in post-structuralist and feminist accounts of writing and writing the body, the principles of meaning of which are understood to challenge dominant conceptions of knowledge" (1995, p. 192). Not surprisingly, such celebrations have invited scrutiny, worries about installing essentialisms. Consider the notion of waves of feminism. In the early 2000s, feminist scholars began to worry about the wave metaphor. In *Signs* in 2004, Lynn Spigel wrote, "with both its oceanic and avant-garde connotations, the waves thesis works to place old feminists on the beach — washed up like fish on the shore" (p. 1211-1212). Ednie Keah Garrison argued in 2005 that the "feminist oceanography" (a term coined by Deborah Siegel) of the wave narrative homogenizes women, linearizes movement, and posits times of lulls, which mismeasures histories of activism. Garrison suggested leaping to a radio wave metaphor, which, she argued, affords different possibilities — frequencies, interferences, and so forth ("Third wave as modulation, not current"). Alison Wylie is more sanguine about water waves, suggesting that "waves do not so much overtake and succeed/supersede one another as rise and fall again and again in the same place, transmitting energy in complicated ways. ... waves propagate and interact even in the simplest of circumstances ... waves are generated in many different ways: by river or tidal currents, by snags and obstructions under water, by wind and traffic on the surface, and, on rare and catastrophic occasion, by grinding shifts in tectonic plates" (173).

<sup>21</sup> And compare Tom Boellstorff in *The Gay Archipelago*, who writes that "For gay and lesbi Indonesians, the self is not that which moves from island to island; it is the water itself, lapping up on multiple shores at the same time" (2005, p. 211). Compare Helmreich, 2009 on Hawaiian archipelagic identity.

<sup>22</sup> Bauman's "liquid modernity" is characterized by the deliquescence of stable institutions and an increased fluidity in social forms and connections. "Fluids," he writes, "neither fix space nor bind time" (2000, p. 2). "Fluids travel easily. They 'flow', 'spill', 'run out', 'splash', 'pour over', 'leak', 'flood', 'spray', 'drip', 'seep', 'ooze': unlike solids, they pass around some obstacles, dissolve some others and bore or soak their way through others still. ... There are reasons to consider 'fluidity' or 'liquidity' as fitting metaphors when we wish to grasp the nature of the present, in many ways novel, phase in the history of modernity" (p. 2). Bauman recognizes that modernity was about "melting solids" from its inception, but that whereas in the old days new solids were to be installed in the place of old, nowadays, fluidity is itself the aim. "Underscoring my sense that water is imagined as a kind of nature that moves faster than culture, Bauman writes, in *Liquid Life*, that "'Liquid modern' is a society in which the conditions under which its members act change faster than it makes the ways of acting to consolidate into habits and routines" (2005, p. 1).

Accounts of the workings of hegemony are often suffused with fluidic metaphors. Thus, Gramsci: the reason Italian political parties have been weak can "be sought in the deliquescence of the economic classes, in the gelatinous economic and social structure of the country" (227). He writes, too, of "viscous forces of certain regimes" (256).

<sup>23</sup> Sloterdijk sees humanity as constantly switching elements and uses the figure of water as a master element to motivate this vision and to underwrite the notion that human being is aimed at creating "spheres" or bubbles within which to exist. Sloterdijk offers his philosophy of being against Heidegger's too-earth bound model. In this model, humans are "medial beings," always diving, submerging, emerging. "Togetherness is described by

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Sloterdijk (1999, page 220) in terms of a relational and inspirational sphere and he is explicit in his proposal to think this sphere in terms of water. Why? Water resonates, water allows floating and diving, water is medial” (80).

<sup>24</sup> Or if not into our heads, then, away from being a source of terror: “the sea has come to mean something else, and its demons have been laid to rest. Or instead the demonic has been displaced onto the panic of skin cancer and fear of raw sewage and mercury in the water” (Taussig, 2006, p. 105-6).

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