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A sea of potential: The politics of global ocean observations

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ABSTRACT

The Global Ocean Observing System (GOOS) is creating a new understanding of the world ocean. With a vast and heterogeneous network of sensors, it converts the ocean's properties into flows of information, creating a "data double" of a dynamic sea. This view of the ocean underlies not only international geopolitics but also more broadly emergent modes of government. This paper analyzes changing strategies for governing global ocean observations to better understand the shifting coconstitution of nature, technology, and politics. In particular, I inquire into the GOOS's recent developments, which indicate a new conception of the ocean as a space of potentiality. I argue that this emergent understanding poses problems for our conventional political analytics, particularly that of biopolitics. To account for this shift, I draw on and extend Elizabeth Povinelli's offering of geontopolitics, which identifies a departure from the fundamental distinctions between life and nonlife made by biopolitics, seeing instead the potential for unpredictable changes not only in human subjects but also in geophysical systems and the contemporary planetary environmental conditions they shape. Emphasizing how geontopolitics both names a new mode of government and signifes its limits, Povinelli suggests three figures, following Foucault's four figures of biopolitics. I conclude by suggesting the world ocean as a fourth figure of geonotopolitics, as that which is so imbricated with life as to be indistinct from it. Throughout, I maintain that like Foucault's figures of biopolitics, the world ocean must be understood as inseparable from the knowledge relations that make it legible.

1. Introduction

The United Nations Educational, Scientific and Cultural Organization (UNESCO) headquarters in Paris are a singular place, and the Annex, where the Intergovernmental Oceanographic Commission (IOC) was based until late 2014, has a unique ambience. Despite the high security, marble-floored lobby, and well-dressed dignitaries, the Annex has a more-than-slightly dated and somewhat surreal quality due to the tiny offices with shabby wooden doors bearing plastic nameplates for each country, the banks of now-obsolete pay phones, and the gently dilapidated primary-color décor. But inside this strange world-out-of-time are the men and women who coordinate some of the newest and most advanced technologies for collecting and storing scientific data: those that constitute the Global Ocean Observing System (GOOS). These technologies and the systems that organize them are changing the way the world ocean is known.

Most of the men and women who sit at the IOC secretariat have some scientific training, but they are also diplomats, educators, technicians, and talented managers of people, projects, and data. Although their mission is largely scientific, they are subject to the tribulations and idiosyncrasies of the United Nations (UN) structure; for example, the IOC faced financial hardships due to the United States' policy to refuse funding to any agency that recognizes Palestine's statehood, following the UN's decision in 2012 (Albert Fischer, personal comm., 12 March 2014). Moreover, as a specialized agency of the UN, IOC officers are invested in ordering the world in way that contextualizes and furthers the UN's long genealogy of (mostly Western) ideals around peace, security, and democracy (Amrith & Sluga, 2008). Yet their work deserves closer scrutiny on its own terms. IOC officers and the scientists and technologies they orchestrate are responsible for the creation of a new concept of the world ocean, or perhaps more accurately a new world ocean: an ocean of data, a digital doppelganger for the wet and wild ocean out there, an ocean made informational. Perhaps the most familiar output of this ocean emerges on the computers of non-expert Internet users, as a Google Earth layer or a snapshot from NASA's Perpetual Ocean data visualization (Fig. 1).

But these seemingly instantaneous God's-eye views belie the

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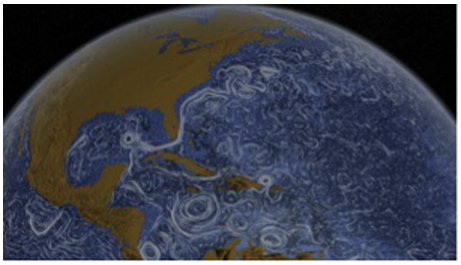

Fig. 1. A still image from NASA's 'Perpetual Ocean' data visualization, showing a dynamic understanding of ocean surface currents. This visualization is comprised of data from a variety of observing platforms, many of which are components of the GOOS. (Source: National Aeronautics and Space Administration. "NASA Views our Perpetual Ocean" 9 April 2012. http://www.nasa.gov/topics/earth/features/perpetual-ocean.html#.VeUXDSwUX-Z).

complex processes by which they are made, and the extensive systems of sensors, scientists, and technicians that make these processes possible (see also Helmreich, 2011). Far from a virtual camera, the GOOS comprises a vast, heterogeneous, and always changing network of ocean observations. These measurements are collected by a number of technologies, including a multitude of in situ and remote sensors, such as satellites, moored instruments, research vessels, and measurements taken by commercial ships (see Fig. 2 for a visual heuristic). Recently, geographers and other scholars have begun to analyze the politics of representation with regard to Earth systems (e.g Farman, 2010; Helmreich, 2011; Jue, 2014). Simultaneously, scholarship is burgeoning on the politics of the ocean as a particular kind of space, with a specific materiality that makes a difference to how we understand human and nonhuman history, politics, and agency (e.g. Anderson and Peters, 2014; Oreskes, 2014; Peters, 2012; Steinberg, 2013; Steinberg & Peters, 2015). This paper both builds on and diverges from these bodies of work as I probe the contemporary knowledge relations that produce the world ocean as one dynamic entity with a special relationship to life on Earth. I ask what the attempts to first know and then govern this world ocean might indicate for emerging relations of nature, technology, and government.

In this paper, I provide one interpretation of the politics of modern ocean observations. This work contributes to recent efforts, cited above, to account for the role of the ocean in a changing geopolitical environment. Whether acknowledged or not, these efforts have as their context a fundamental shift in the reimagining of the relationship of government and nature, as signaled by the advent of the Anthropocene in political and environmental discourse. To locate contemporary understandings of the world ocean in this context, I draw especially on the recent work of Elizabeth Povinelli, who is remarkable for theorizing life in late capitalism, and moreover, especially in newer work, "the "composite nonlife nonsovereign being[s]" – like the world ocean, the global atmosphere, and our own familiar geophysical landscapes that today seem both threatening and in jeopardy (2015, p. 173). Going beyond the work of by-now countless scholars who argue for the inclusion of the more-than-human in notions of agency, politics, and sociality, Povinelli provides a careful and incisive analysis of how these beings challenge existing political theory (Povinelli, 2014; 2015). In her most recent work, and likely to be expanded upon in a forthcoming book, she not only dispels the nature/society division but moreover shows how its invocations and betrayals are at the heart of modern government (2014; 2015; 2016). As I will show, methodologies of ocean observations on the global scale indicate a shifting focus from the ordering of life to the monitoring and modulation potentiality, across not only the nature/society divide but also, perhaps even more crucially, the life/nonlife distinction.

I argue that contemporary practices of ocean observations, and hence the world ocean that is given to us by these observations, pose problems for our established forms of political analysis. Povinelli's concept of geontological power helps me to think through the challenges that the contemporary world ocean raises with regard to both established modes of government and our tools for analyzing them. She names *geontological power* as an emerging movement away from the governance of life as such (conventional biopolitics) and toward a mode governance that operates on the contemporary indistinction between life, death, and nonlife. (Povinelli, 2014; 2015). While Foucault theorized the address of power to *life*, Povinelli inquires after the address of power to *potentiality*, in the context of new understandings of potentiality, effort, and uncertainty that extend across geological, biological, technological and cyborg entities (see especially Foucault, 2003; 2009). Geontopolitical power is the emergent form of government that newly attempts to grasp contemporary planetary environmental conditions and the challenges they present. The concept of potentiality has garnered much attention in much critical theory styled after Spinoza. Povinelli argues that potentiality, or the capacity to change in unforeseeable ways, was previously considered a property only of life; but now the potentiality of the non-living threatens in such ways that the distinction between life and nonlife loses its pivotal power.

Povinelli, I think, goes beyond advancing understandings of the political power of the more-than-human or the nature of potentiality itself. More significantly, she helps us to gain analytical traction on the entities that now scramble the meanings associated with life, death, and inert material, even as we, as critical thinkers, resist taking them ontologically at face value. While many other authors write normatively, exhorting scholars to pay attention to the agency of the nonhuman, Povinelli takes an analytic lens to

Fig. 2. Visual schematic of the GOOS, showing its various components for making ocean observations (Source: Intergovernmental Oceanographic Commission. "GOOS Systems" http://www.ioc-goos.org/).