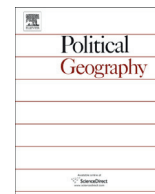




ELSEVIER

Contents lists available at ScienceDirect

Political Geography

journal homepage: www.elsevier.com/locate/polgeo

Climate science and slow violence: A view from political geography and STS on mobilizing technoscientific ontologies of climate change



Shannon O’Lear *

Department of Geography, 213 Lindley Hall, University of Kansas, Lawrence, KS 66045-7613, USA

ARTICLE INFO

Article history:

Available online 16 February 2015

Keywords:

Science and technology studies

Slow violence

Climate models

Climate science

Climate change

Carbon data

Post-political

ABSTRACT

This paper’s central concern is to trace how dominant, scientific understanding of climate change is mobilized in ways that set a course towards slow violence. Slow violence is indirect, latent, and results in neglectful human suffering. It can result from particular actions or decisions; it can result from epistemic and political dominance of particular narratives or understandings. This paper takes a constructivist Science and Technology Studies (STS) perspective to look at the emergence of a technoscientific understanding of climate change and to consider political geographic implications of this interpretation. Following an overview of inroads already made in applying an STS approach to climate studies, I turn to two examples of specific scientific narratives or practices, reliance on Global Circulation Models by the Intergovernmental Panel on Climate Change (IPCC) and carbon data, to consider ways in which selective, political mobilization of these interpretations of climate change may contribute to forms of slow violence. The science in either case is not in question. Instead, the foreclosure of other ways of understanding human–environment interactions is brought about in part by geopolitics as usual and through the work of powerful actors and interests. The paper argues for a re-politicization of climate change and considers examples of alternative narratives and efforts towards equity and transparency.

© 2015 Elsevier Ltd. All rights reserved.

Introduction

Climate change has been associated with violence. Increasing temperatures, more frequent droughts and floods, and implications for food supplies have been linked to increasing tensions among people with limited options to seek alternatives (Schwartz & Randall, 2003; Parenti, 2011; U.S. Department of Defense, 2010). Climate change has been described as a “threat multiplier for instability” from a military perspective (Center for Naval Analyses (CNA) 2007 and 2014). Special issues of *Political Geography* in 2007 and again in November 2014 have showcased scholarly work on ways in which climate change may contribute to increased conflict. These same approaches have been critiqued for applying methods for studying conflict to what is arguably an altogether different phenomenon (Gleditsch, 2012; Meierding, 2013; Salehyan, 2008) and for playing into Malthusian degradation narratives that oversimplify complex relationships and processes (Barnett & Adger, 2010; Hartmann, 2010).

Although there are multiple, simultaneous narratives for understanding climate change, the dominant framing in many conflict narratives as well as public discussion and policy debates more broadly revolves around technoscientific interpretations of climate. This paper draws from Science and Technology Studies (STS) to look at how this dominant understanding has emerged but more importantly to consider political geographic implications of this interpretation of climate change. This paper focuses on two particular modes of understanding climate change, namely, the reliance on Global Circulation Models (GCMs) by the IPCC and carbon data, to consider how the selective use of these interpretations of climate change may contribute to forms of slow violence.

It is important to clarify what slow violence is. In contrast to violence narrowly defined in terms of armed conflict or intentional, direct destruction, I am drawing on Rob Nixon’s (2011) work on slow violence which considers indirect, latent, neglectful human suffering resulting from particular actions or decisions. Unlike spectacle-driven media, Nixon’s work on slow violence directs our attention to “the representational challenges and imaginative dilemmas posed not just by imperceptible violence but by imperceptible change whereby violence is decoupled from its original causes by the workings of time” (p. 11) and, I would add, space. This view of violence

* Tel.: +1 785 864 2041; fax: +1 785 864 5378.

E-mail address: olear@ku.edu

focuses and expands upon elements of Johan Galtung's work on structural violence. Galtung developed a perspective on violence that recognizes multiple dimensions of violence. Violence can range in extremes from levels of deprivation to death, it can occur across immediate to gradual temporal time scales, it can be a direct, intentional act at the hands of an identifiable actor, or it can be indirect, unintended, and its source unclear (Galtung, 1969). An empirical example is Michael Watts's seminal book, *Silent Violence* (1983), in which he examines the skewed distributional effects of Nigeria's oil boom and its deep linkages to agricultural decline and increased rural poverty. A related approach to violence is found in James Tyner's (2012) work on violence and the notion of "letting die" – a passive, non-action understood to result in the suffering and demise of certain groups of people. These concepts share with Michael Glantz's concept of "creeping environmental change" (Glantz, 1998) an appreciation of slow moving, cumulative, and usually irreversible degradation resulting from dominant priority structures and power dynamics. Violence here is also understood, in Simon Springer's (2011) terms, as a "relational assemblage" that does not merely manifest in isolated locations but is generated through ongoing, spatially extended processes of neoliberalism and associated political decisions.

In his work on slow violence, Nixon emphasizes that, "a major challenge is representational: how to devise arresting stories, images, and symbols adequate to the pervasive but elusive violence of delayed effects" (p. 3). Before alternative stories, images and symbols may be fully developed, it is important to understand how dominant narratives have been established and continue to persist. In this paper, I outline how GCMs and carbon data have emerged as dominant interpretations of climate change and how they have been mobilized in ways that set a path for slow violence. In so doing, I demonstrate how an STS approach may be useful for political geographers interested in analyzing geopolitical and policy narratives. If we are to generate and promote alternative politics around climate change (or other arenas where we understand science to inform policy), then we must first identify narratives and understandings which obstruct or obscure more just outcomes.

Slow violence may be understood as a dimension of climate justice or even environmental justice more broadly. Social organization around environmental justice in the 1980s focused on inequitable disposal of hazardous waste and longer term concerns for the health and well-being of poor people and ethnic minorities (Bullard & Lewis, 1996; Harvey, 1996; Kurtz, 2003). Environmental justice organizations sought to address inequity, exclusion, and ways in which basic needs of some groups of people were undermined in hazardous waste decision making. Climate justice, a related but distinct type of social movement, shares concerns with environmental justice (Roberts, 2007). Early work in climate justice focused on keeping fossil fuels in the ground to hinder a warming atmosphere and addressed inequitable transfers of wealth from the global South to the richer global North (Schlosberg & Collins, 2014; see also Reed & George, 2011). Slow violence is not a movement, as are environmental justice and climate justice, but it is a concept that focuses attention on latent, gradual, and invisible negative externalities related to mis- or abuse of environmental resources and ecosystems. Slow violence is embedded within the concerns of both environmental and climate justice and highlights the need for transparency and inclusion in decision making processes pertaining to the use and allocation of environmental resources and the handling of industrial waste. Scalar disconnects between equity defined at the level of international policy making and equity in terms of local, distributive justice (Adger, 2001) is a particular avenue to focus attention on slow violence. That is, what appears to be equitable or sensible at one level of environmental decision making may, in fact, have significant implications for slow

violence in particular places where impacts of higher level decisions play out over time. Additionally, international climate negotiations focused on economic issues repeat many of the same problems inherent in the development process (Lohmann, 2008) raising issues not only for environmental and climate justice but also for slow violence.

In the following section, I provide an overview of climate narratives and of the development of the technoscientific perspective of climate change. I then introduce the broad field of STS and discuss why a constructivist STS perspective is valuable for expanding political geographic inquiry into relationships of power and space. Following an overview of inroads already made in applying an STS approach to climate studies, I then turn to two examples of specific scientific narratives or practices, GCMs and carbon data. Both of these overlapping and co-constitutive narratives have political geographic dimensions evident in how power is concentrated, how certain place-based practices are prioritized, and how other places (and possibilities) are marginalized. Both narratives feed into neoliberal "solutions" to climate change and have implications for slow violence. Scientists, as individuals, are not viewed as problematic. Instead, it is through a better understanding of scientific practice and its relationship to policy initiatives that we can see how current disparities and power dynamics are sustained.

Climate narratives and the emergence of a technoscientific narrative

In his classic work, *Traces on the Rhodian shore: Nature and culture in Western thought from ancient times to the end of the eighteenth century*, Clarence Glacken (1973) examined how interpretations of climate changed over time and in different places dating back to the Greeks through the Enlightenment. More recently, Mike Hulme, founding Director of the Tyndall Centre for Climate Change Research, has considered how different perspectives from science, social sciences, economics, psychology, and even faith contribute to diverse interpretations of climate change (Hulme, 2009). Different cultures understand and communicate about weather, seasons, and climate through context-specific lived experience, practices, rituals and myths (Strauss and Orlove 2003). There has been considerable scholarly work to examine interpretations of climate across different cultures, historical contexts, and methods of interpretations (see Carey, 2012). The *Journal of Historical Geography* devoted a special issue to narratives of climate change as stories situated in place and time with particular visual representations and understandings of agency (see Daniels & Endfield, 2009). The emphasis on the global scale of climate change has been considered as problematic in its neglect of other, human scales of lived experience (Fogel, 2004; O'Lear, 2010; Smith, 2007). Yet despite the richness of social science and humanities work on climate and climate change, the dominant narrative, at least in the economically industrialized parts of the world, is a technoscientific approach that reduces climate to measurable, quantifiable observations about environmental systems. Reliance on grand narratives of mathematical, natural science erase or significantly discount the presence of humans and hide uneven power and social relations rooted in neoliberalism (Liverman, 2009). At the same time, climate change remains unsettled in large part because there are so many different agendas – e.g., protecting the planet, protecting economic growth, protecting the energy industry – attached to it (Malone, 2009).

Early contributions to climate science shaped the current, scientific understanding of climate change. Some of the key points on the timeline include the identification by early Greeks of climate zones by latitude, John Tyndall's experiments with absorptive

Download English Version:

<https://daneshyari.com/en/article/1061841>

Download Persian Version:

<https://daneshyari.com/article/1061841>

[Daneshyari.com](https://daneshyari.com)