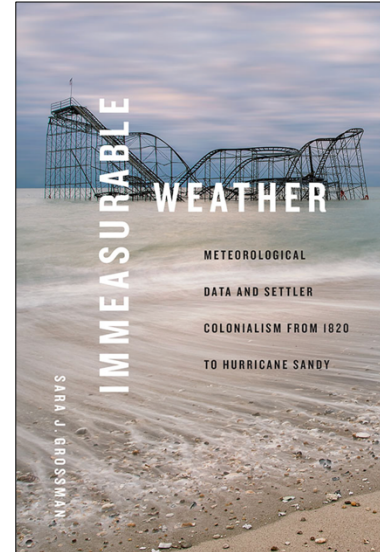


Sara J. Grossman, **Immeasurable Weather: Meteorological Data and Settler Colonialism from 1820 to Hurricane Sandy**, Durham, NC: Duke University Press. 2023, 264 pp., \$27.95 (paperback), \$104.95 (hardcover).

Reviewed by
Pamela C. Perrimon
University of Southern California

In *Immeasurable Weather: Meteorological Data and Settler Colonialism from 1820 to Hurricane Sandy*, Sara J. Grossman entangles the history of meteorological data with narratives of settler colonialism and nationalism. She argues across chapters that meteorological data is a quantifying project of settler control on the environment. These seemingly innocuous ways of thinking about weather are in fact entangled with scaffolds of White supremacy and colonial domination. Knowledge and structures of knowledge are always inflected with power. In the United States, a nation born out of a settler colonial project, weather is invested in maintaining the structures of domination. Grossman’s addition to a growing literature on the critical histories of the environment inflects the weather, or at least the ways we come to know and name it, with histories of power and the control of environmental relationships. Her methods are primarily archival, looking at the records and history of weather data collection to inform her arguments. Thus, Grossman builds up a trail of receipts and evidence that unravels the history of weather in the United States.



Immeasurable Weather is an important book that interrogates the history of weather data in the United States with special attunement to the colonial structures that underlie our ubiquitous “Anthropocene.” Grossman’s critical perspective to data, and weather data specifically, is a necessary intervention into the history of the United States as a settler colonial power, and how deeply situated settler systems are woven into communal ways of knowing and looking at the world. She begins with deceptively simple concession that “weather data enacted settler worldviews that environments—from weather to water to biota—were objects to be measured, with their meaning and value resting in their capacities to be known through quantification” (p. 5) to unravel the history of how we relate to the *stuff* of knowing weather. This worldview is also important because it separates weather from its environmental and global entanglements. Weather becomes a thing that happens separate from land, place, and influence. Thus, it is removed from localized and specific ways of relating and reacting to the world and domesticated into a particular epistemological framework.

Grossman organizes her book chronologically, leading the reader through a narrative spanning 200 years of U.S. meteorological history. Thus, the book is organized as a story, with each chapter a vignette building on the development of weather into the contemporary object of quantification and control that it is. It should be noted that Grossman’s introduction does important work for the book, as it is here that she carefully binds key terms to specific definitions that connect her chapters. The distinctions, for instance, between *Land* (capitalized) and *land* is a distinction and should be carried throughout her history. Grossman takes particular

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care to grapple with the distinction between these terms early on, and to this end she writes, "I use land in the nonproper sense to indicate the relationship settlers had with the Lands they occupied" (p. 6). In a similar manner, she also takes care to lay out how other key themes such as *climate change* and *data* (both the singular and plural of the term is defined in her work). The care she gives to her key terms early on is important, as they give nuance to her chapter arguments throughout the rest of the book.

Her critical history of weather in the United States begins in the late 19th century with the beginning of weather quantification as a national project, engaged in a grander narrative of nationalist domination of U.S. nature and Land. Chapter 1 lays out how weather data and collection was started as a necessary analytic to land surveyors in the northeast United States. Thus, weather became one of the earliest forms of contiguous data collection and assessment in a settler colonial United States.

Chapter 2 complicates her critical analysis of weather, as it acknowledges the complexities and contradictions in creating weather as a dominant narrative. Here, Grossman shows how it was the labor of White women who ensured that weather became institutionalized in its patriarchic and settler colonial vision. It was in fact only through participating in these spaces that White women were able to enter scientific fields at all. Thus, women's labor, which was also minimized and disenfranchised, worked to build their own subjugation and that of others through weather data collection.

Chapter 3 of *Immeasurable Weather* addresses the shift to technical masculinity in the United States through the quantification of the upper atmosphere. Weather balloons and advances in meteorological tools opened pathways for weather to be measured and controlled in new and comprehensive ways that solidified meteorological control over our experiences of weather.

Chapter 4 situates weather instruments within the early 20th century and the emergence of the 24-hour surveillance of weather patterns becoming the norm. Alongside 24-hour weather surveillance came the packaging of weather as a consumable public resource, feeding into narratives of the past and future. When weather became so surveilled, it also became commodified and integrated into consumer cycles of news and academic production.

Chapter 5 is the last body chapter of *Immeasurable Weather*. It is here that Grossman brings the consequences of two centuries of domestication and quantification of weather home through looking at satellite data and their role in tracking weather events. Satellite data grant immediate and continuous global access to data being generated about the environment, completely quantifying weather into technologies of control. Satellite meteorology is also a field that benefits from, and indeed a product of, military collaboration, problematizing the weather into another product to legitimate the military complex.

Immeasurable Weather is suitable for communication and critical/cultural studies scholars. It is also appropriate reading for science and technology readers and the environmental humanities. Grossman's book is straightforward and engaging, with clear prose that lends its chapters viable as readings for undergraduate and graduate courses. Finally, for anyone interested in the growing body of work about critical histories of the environment and "staying with the trouble" (Haraway, 2016, p. 1), *Immeasurable Weather* delivers.

Immeasurable Weather is an important addition to a growing body of work that troubles the daily structures that we take for granted. Grossman adeptly disrupts the notion of weather by placing it in context with the nationalist project. I deeply enjoyed reading this book and grappling with its arguments. The chronological construction of her thesis makes the case that weather and power are inextricably intertwined with the national project and have been for a while now. Perhaps the one critique I have about the book is that the nuance of the key words laid out in the introduction is lost when approaching the chapters independently. Each of the case studies Grossman unfolds are able to stand on their own. I personally have included chapters into my work and teaching. Instructing these chapters individually, I found the care taken to define and bind the keywords to be unfortunately lost. This is a common tension with chronological books where each chapter builds on the last. Despite this, *Immeasurable Weather* is delightful to read. Its overarching arguments that weather data is a data of colonial power and control is clear, well argued, and carefully attended to throughout her archival dive into weather data in the United States. Weather data is a colonial relationality to the earth as a whole, and the land in the local. Colonial meteorology devalues alternative relationships to weather through the calcification and centralization of the weather as a political body and structure. In demonstrating how these structures came to be, Grossman gleefully complicates weather, lest we take it for granted.

Reference

Haraway, D. J. (2016). *Staying with the trouble: Making kin in the Chthulucene* (Illustrated ed.). Durham, NC: Duke University Press.