Lorraine Daston. *Against Nature*. MIT Press 2019. 96 pp. \$13.95 USD (Paperback ISBN 9780262537339).

In this short and highly readable monograph, the author aims to answer the age-old question of why humans construct moral orders grounded upon natural orders, deriving normative authority from divine or otherwise nonanthropomorphic sources in nature. Why, for instance, did the drafters of the U.S. Declaration of Independence invoke natural laws rather than simply relying on human reason and argument to ground their objections to British colonial rule? Answering this and related questions about the relationship between moral and natural orders demands a precise method. Daston describes hers as philosophical (not cultural) anthropology, probing the motivations behind the intellectual leap—often described as 'the naturalistic fallacy'—from the natural to the normative (3). In that vein, her inquiry begins with a remark from Immanuel Kant's underappreciated work *Anthropology from a Pragmatic Point of View*.

The book is organized into an introduction, six core chapters, and a conclusion. In the introduction, Daston announces the grand purpose of her project, relying on the metaphor of an archaeological dig: 'My line of inquiry will be to excavate the sources of the intuitions that propel the search for values in nature' (5). The second, third and fourth chapters explore three kinds of natural order in the Western philosophical tradition: (i) specific, (ii) local and (iii) universal-legal, respectively. The fifth chapter examines the passions that motivate humans to demarcate the unnatural from the natural. Chapter 6 locates the relationship between specific norms and normativity as a general concept. Chapter 7 identifies the plurality of orders, both natural and moral. Daston's conclusion returns to the questions motivating her excavation work, namely, why humans so commonly extract normative orders from natural ones, and to what extent, if at all, this operation should concern us.

Chapter 2 articulates the first sense of the term 'nature': specific nature, a thing's essence or, in Daston's words, 'its ontological identity card' (7). For the ancient Greeks, especially Aristotle, specific nature indicated not only a thing's essential characteristics, *natura* or *physis*, but also its potential for directed growth, its *telos*. The modern equivalent of Aristotelian teleology is genetics, traits and potentialities transmitted from one generation to the next through biochemical material or DNA (9). Specific nature also manifests as 'species nature,' whereby organisms replicate themselves through random variation, adaptive selection, and evolutionary growth. Daston also draws attention to the freaks and monsters that sometimes result, the so-called 'spectre of the unnatural,' universally abhorred because they defy the natural order. The author concludes the chapter with the salient point that 'specific natures guarantee an order of things' (13).

The third chapter addresses the second category of nature: local or place-based natural environments. Herodotus described the Egyptian communities that sprang up along the Nile River in fourth century BCE. For Daston, these localities exercise power over the human imagination not simply because of their unique flora and fauna, but also given the distinctive ways of life that emerged there (15). The customs generated by human communities thus become inextricably linked to natural history and local ecology. According to Daston, it is due to this association that we infer human character faults and intentions, such as hubris and greed, as the primary causes of the high incidence of natural catastrophes ('nature's revenge'): 'The paradoxical consequences of ever-deeper inquiry into the natural causes of devastation has been to expose human motives, turning natural disasters into sagas of crime and punishment—so far, mostly at the local level, though this might be changing in debates over global climate change' (21). In other words, natural disaster narratives have always taken a decidedly anthropogenic turn.

The final type of nature Daston explores is universal natural law, an object of inquiry for a bevy of classical Western thinkers, including Aristotle, Aquinas, Grotius, and Newton. At the heart of their theories of natural law is the idea that valid human-created or positive law must accord with divine law. According to Daston, the scientific basis of natural law is the 'doctrine of universal determinism' (23). Modelled after the laws of celestial mechanics, the doctrine was appropriated by social theorists from natural philosophers (or scientists) and applied to human activities, from mercantilism to governance, instilling these activities with a divinely ordained regularity or order. From Adam Smith's 'invisible hand' to the American Founders' Declaration, appeals to natural law imbue ordinary claims about human behaviour with universality and moral force, rendering them divine truths outside the realm of human control (31).

Chapters 5 and 6 launch the book's main argument: '[E]ach of these natural orders [(i) specific, (ii) local and (iii) universal-legal] has been used to imagine and justify various moral orders' (33). When humans transgress these natural orders, they produce three potent emotional reactions—what Daston calls the 'passions of the unnatural': (i) horror, (ii) terror and (iii) wonder. Horror and terror are felt when we face a series of inexplicably unnatural occurrences ('nature's revenge'). Wonder is experienced when we are overcome by 'a moment of astonished disbelief' and seize upon a breakdown in the moral order as the sole explanation for the corresponding breakdown in the natural order (35). Besides explaining the unnatural occurrence, humans also respond cognitively by judging what ought to be (normativity). We derive norms from nature because natural/divine sources invoke a higher authority than norms that emerge from messy human discourse, compromise and agreement: 'Normativity presupposes order, both practically and theoretically' (51). Order can only emerge out of chaos, including the attendant horror and terror, if the invisible is made visible, thereby evoking human wonder.

The final two chapters address nature's function as an ordering device and argue that any natural order worth its weight must preserve natural phenomena, not simply substitute theological entities or transcendental reason for nature. Daston claims that nature qua order has two advantages: one, it is omnipresent and, two, it is the meta-order or 'repository of all orders' (55). Naturalists have long segregated the world into the natural and the human, demonstrating their own anthropocentric bias. In point of fact, Homo Sapiens are part of the natural order. We gravitate toward nature as an ordering device because, first, judgment about what ought to be (or normativity) presupposes order and, secondly, nature offers plentiful illustrations of functioning orders (e.g., the bee hive or the walnut tree grove). In the conclusion, Daston appeals to the human sensorium, or our capacity to perceive the 'surface of things' and appreciate that 'it is appearances all the way down' (65). She challenges the notion that deriving norms from nature leads to a conservative understanding of norms: that is, norms that are fixed not flexible, transcendental not customary, and universal not contingent. However, this position is overstated. Naturalizing norms is a weaker strategy than most suppose. For every moral order justified by a natural order, there are alternative orders in nature that would warrant an oppositional moral order. In Daston's words, 'there is no one unique order of nature in which to ground norms' (68). Naturalism is not about justifying specific norms with specific examples of order in nature, but about grounding normativity per se on a wide view of nature, that is, nature conceived as an ordering device. Lastly, Daston insists that naturalists should look for better representations of nature and respect the bounds of human reason, rather than invoke theological entities (angels, devils, divine intelligence) or transcendental reason to justify moral orders.

Overall, Daston's brief work of philosophical anthropology is an insightful contribution to the extant literature on naturalism. My only criticism is that it is too short to delve into the wider implications of its erudite analysis for the diverse schools of philosophic thought. To use pragmatism

as an example, many contemporary pragmatists deploy metaphysical accounts that dispense with the transcendental, carry the label of naturalism, but are weakly grounded in naturalistic ontology. These ontologies typically amount to little more than a thin account of organism-environment interaction—what might be called 'naïve naturalism.' For instance, in *The Things on Heaven and Earth* (Fordham University Press 2013), John Ryder proposes 'to articulate a philosophic perspective through which it is possible to make sense of whatever experience and thought reveal or generate, however they reveal or generate it' (3). 'Whatever' and 'however' suggest how wispy and over-inclusive Ryder's naturalized 'philosophic perspective' is. His naïve naturalism amounts to little more than a relational ontology weakly tethered to a constructivist theory of judgment. In contrast, a deeper, more substantive form of naturalism must confront Daston's challenge and reimagine moral orders grounded upon natural orders in ways that preserve the natural phenomena.

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