Anthropocene Politics

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Politics and the Anthropocene. By Duncan Kelly. Cambridge: Polity, 2019. 185p. $59.96 cloth, $19.95 paper.

The Birth of Energy: Fossil Fuels, Thermodynamics, and the Politics of Work. By Cara New Daggett. Durham, NC: Duke University Press, 2019. 280p. $99.95 cloth, $26.95 paper.

Climate Machines, Fascist Drives, and Truth. By William E. Connolly. Durham, NC: Duke University Press, 2019. 136p. $84.95 cloth, $22.95 paper.

Those for whom the term "Anthropocene" tends to evoke academic faddishness may be surprised to realize that the discourse about it is now two decades old. The term was first proposed in a 2000 paper by the atmospheric chemist Paul Crutzen and biologist Eugene Stoermer to describe the geological epoch in which human activity has come to shape the Earth itself. Since then, the concept has generated a vast amount of scholarly conversation and a wide range of interpretations, often concerning the start date of this new era: Did the "age of man" begin with the use of fire? The development of settled agriculture? The rise of capitalism? European settlement of the Americas? And so on. Although these debates have raged across the humanities and sciences for years, political theorists have largely kept their distance. As the climate crisis worsens, however, many may now be looking to play catch-up. If so, each of the three books under review here holds out the promise of helping us understand the theoretical implications of this epochal transformation.

Duncan Kelly's *Politics and the Anthropocene* performs a useful service by offering a brisk but remarkably thorough overview of how various scholars have thought about the Anthropocene and what it means for politics. The Anthropocene, Kelly writes, poses serious challenges to the core concerns of political thought. It requires us to take seriously the interconnections between the natural world and the artifice of politics and to rethink many of the most central issues of politics, from economic growth to ethical values, all while grappling with vastly different scales of time and space than we are used to. As Kelly argues, "the real challenge of the Anthropocene comes in forcing us to confront how very difficult it really is to think politically at all across these competing temporal, spatial, and intersectional perspectives" (p. 7). He nevertheless sets out to consider how we might begin to do so.

Synthesizing the extant literature on the Anthropocene is a daunting task, both because of its size and how widely it ranges. Kelly tackles it conceptually, examining how the Anthropocene frame causes us to rethink various kinds of problems: timings, inequalities, growth, debts, population, and value. In each chapter, Kelly both reviews existing literature and offers his own gloss on it. In considering time, for example, he examines how the Anthropocene brings the long scope of geological time into collision with the short timelines of electoral politics—what he calls "criss-crossing time frames" (p. 16)—and proposes the categories of deep time, democratic time, accelerated time, and news time. Rather than privileging one over another, we must learn to think about them all together. How, for example, can we think about the revolutions of the eighteenth century in relation to major climatic changes that occurred and the food shortages they caused without falling into the trap of climate determinism?

Framing discussions around issues allows Kelly to address a wide range of literatures and draw insightful linkages among them, connecting, for example, Marxist critiques of naturalized social systems to Timothy Morton's idea of "being ecological" to the "doughnut economics" proposed by Kate Raworth. Yet the leaps from, say, utopian socialists' speculative interest in "controlling the weather" to the development of the biosphere concept by the Russian geologist Vladimir Vernadsky can occasionally give a reader whiplash (p. 9). Often Kelly seems to be

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circling around a problem without ever quite zeroing in on it, offering many ways of thinking about a given question but less in the way of guidance through it.

Kelly also puts the Anthropocene literature, which is mostly not in political theory, into conversation with contemporary political theory that is not overtly about the Anthropocene—citing, for example, Lea Ypi on colonialism, Arash Abizadeh on borders, Isaac Nakhimovsky on the closed commercial state, Nadia Urbinati on democracy, and so on. (That said, the connections could at times be stated more clearly: why Thomas Piketty's analysis of inequality is crucial to understanding the Anthropocene might not fully register with a reader new to ecological economics.) In such a short book, these connections are often relegated to the citations, but they point the way to a more robust integration of the core concerns of political theory with those of ecology. The book does not, however, engage with much literature in the field of environmental political theory (EPT), where scholars have long engaged the questions Kelly raises. This itself reflects a genuine, if unfortunate, state of affairs; namely, that EPT is for the most part treated as an enclave within the field. Kelly's book, I hope, can help political theorists recognize that the environment is not merely an issue or topic but is a framework with which we must all contend.

The brief epilogue gestures toward some ways that political theorists might respond to the Anthropocene. Kelly argues for approaching ecological questions historically: after all, he asks, what is the Anthropocene but a "regime of historicity, a way of seeing a problem or concept across multiple layers of time and space" (p. 113)? Kelly is a historian of political thought, and it is true that the Anthropocene tends to act as a Rorschach test in which scholars see their own concerns reflected. Yet I think he is right that the Anthropocene requires a historical perspective, both on the changes that have reshaped our physical world and on the conceptual tools we have used to understand it. Moreover, as Kelly argues, we can learn from the history of political and economic thought even where ecology, nature, and the environment are not overt themes. This history reminds us that modern politics has largely been concerned with distributing economic risks and benefits, both within polities and globally. The Anthropocene introduces new risks, most notably in the form of climate chaos, and will require a new accounting of costs and benefits—but such problems represent twists on existing frameworks rather than an upending of them. Similarly, the history of international relations, from nuclear strategy to the New International Economic Order, might help us imagine new forms of internationalism suitable for facing the reality of planetary processes. The history of political economic thought can help us approach economics more expansively, with moral and political questions at the fore. And so on.

Indeed, Kelly subtly but consistently frames the Anthropocene as an economic problem. As he rightly observes, political discussion about the environment emerged in tandem with the modern study of political economy: whether considering the distribution of natural resources or effects of climate on national character, political economic thought was, in its early days, deeply concerned with nature, and it ought to be again. As Kelly argues, "the emergence of the Anthropocene, the rise of modern industrial capitalism and representative democracy seem coterminous" (p. 13). Yet figuring out which aspects of these histories can be disentangled—or, as economists might put it, "decoupled"—and which cannot will be monstrously complicated.

Whatever we do, Kelly argues, we must not give in to climate determinism: political decisions are still ours to make. He is refreshingly resistant to the pessimism verging on fatalism that pervades so much discussion of climate and environmental politics, taking instead a tone of pragmatic utopianism: rather than serving as mere fantasies, he argues, challenges "to the established narratives of a liberal world order" are the "most realistic" way forward (p. 122).

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If Kelly ranges widely in sketching a portrait of what the Anthropocene means for politics, Cara New Daggett in *The Birth of Energy: Fossil Fuels, Thermodynamics, and the Politics of Work* focuses on a moment she describes as the "Victorian Anthropocene," when a fossil-fueled industrialism transformed notions of work, race, and the central object of Daggett's study: energy. Energy, Daggett claims, is the "ecological concept par excellence" (p. 2), in that it helps us see how everything really is connected. Like money, it makes different kinds of things commensurable, so that we can compare the activity of a horse, a human, and a motor or consider the output of one society alongside another. Yet whereas we know that money is a human invention, we tend to take energy for granted as something that simply exists. The fact that we now see energy as a natural category just reflects how successfully this "master code" has infiltrated our understanding of the world, "imbuing the drive toward efficiency and productivity with an aura of natural timelessness" (p. 133). Daggett therefore sets out to uncover the origins of energy as a concept and, in so doing, to reveal the political and economic assumptions that have molded it. Although elements of what we now think of as "energy"—heat, for example, or fuel—have long been the object of study, Daggett argues that the modern concept of energy must be understood in relation to Victorian ideas about work. Thinking about work also goes back much further than the Victorian era, of course; yet Daggett argues that the new concept of energy helped older work ethics adapt to industrial capitalism and its needs.

Daggett breaks this story into two parts. The first concerns the "'discovery' of energy" (p. 7) in Victorian Britain, where rapid industrialization drove the development of new forms of knowledge. As coal-powered steam engines transformed the nineteenth-century world, the science of thermodynamics emerged as an essential tool for organizing both coal power and human labor in the interest of maximizing productivity and minimizing waste. This new science of energy, Daggett argues, was also bound up with Scottish Presbyterianism, which saw in thermodynamics confirmation of the Protestant work ethic. The resulting "geo-theology of energy" (p. 82) imbued energy management with a moral valence: to waste energy was to waste God's gifts.

The second half of the book shows how, once established, the logic of energy entered into the "imperial governance of labor" (p. 8), justifying a civilizational hierarchy that placed white Europeans at the top and colonial subjects at the bottom. In the logic of energy, Africans and Asians were figured as lazy and indolent, wasteful of energy that could be more productively used under European direction. Energy was therefore central to a "political rationality that served imperial domination," helping Western powers organize and make legible the rest of the world and to discipline people in the name of efficiency. To describe this power relation, Daggett draws on the anthropologist Dominic Boyer's idea of "energopower" (p. 124), derived from Foucault's concept of biopower: whereas Foucault's biopolitics sought to describe the governance of living populations, Daggett argues that "the object of energopolitics is more circumscribed: work" (p. 127). At the same time, energopolitics unifies human and nonhuman activity, rendering the entire world a vast supply of potential work waiting to be used in service of production. Its ultimate aim is to "put all energy on Earth to work" (p. 131).

The Birth of Energy is packed with fascinating details, and Daggett provides an impressive synthesis of a wide range of scholarship on energy, ranging from Andreas Malm and Timothy Mitchell's political histories of energy transitions to a reading of Aimé Césaire's (1955) *Discourse on Colonialism* as a call for a "redistribution of energy" and resistance to imperial labor practices (p. 149). Yet even though the "vignettes of energetic governance" (p. 108) she offers are consistently thought provoking, the central argument is somewhat elusive. Energy appears in metaphors, tropes, narratives, and discourses that coincide with and serve imperial and capitalist projects; but its precise relationship to those projects is often hard to parse. More significantly, although Daggett makes a convincing case for understanding energy in relation to work, it is work rather than energy per se that often seems like the main driver of the narrative. As Daggett admits, energy is often visible only as a "trace" (p. 168), to be inferred from discussions of work and productivity. This raises two major questions: Is the "logic of energy" a cause or a symptom? Is it possible to undo this logic without undoing capitalism or imperialism first?

Ultimately, Daggett runs into a problem familiar to genealogies more broadly: not many concepts, institutions, or frameworks could survive the withering glare of genealogical analysis unscathed. Nearly all the forms of knowledge we rely on to understand the world were developed in the service of capital or state power, imbued with theories oriented toward justifying social and economic hierarchies, and deployed in the service of ends that many now deplore. We must judge whether these histories are inherent to the concepts they have produced and then assess which ideas remain usable or reclaimable and which must be abandoned altogether. So, can "energy" be put to work in the service of other political and economic projects? And if not, what can we use to name the phenomenon it describes?

In the conclusion, Daggett ventures a proposal in this direction. She argues for what she calls "energy freedom": liberating energy "from the strictures of waged productive, work" so that people may use their energy as they will (p. 204). To develop this idea, she puts "post-carbon movements into conversation with the post-work political tradition" (p. 190), drawing on Kathi Weeks's (2011) *The Problem with Work* to argue for liberating energy from the drive toward efficient work and instead using our time, and energy, as we choose. Instead of orienting contemporary energy politics solely around the call for "jobs, jobs, jobs" (p. 203) made both by defenders of coal mines and those championing green jobs, might we demand reorganizations of labor that allow us to expend our own time in less energy-intensive ways? Connecting Weeks's Marxist-feminist critique of work with calls to reduce energy and resource use is an exciting and important move, and one to which I am highly sympathetic. In fact, it is because this pairing has so much potential that I wish Daggett had spent more time exploring its implications. How, for example, does her call for less work pair with the suggestions put forth by ecologically minded thinkers like Wendell Berry that reducing fossil fuel use will require more labor-intensive production? Can the work ethic whose long history Daggett recounts be remade in time to head off catastrophic climate change? Is a universal basic income the best tool for increasing leisure time, as Daggett suggests? What might a feminist post-work, post-energy politics learn from the older concepts of "force-flow" (p. 19) that Daggett cites early on, like the Chinese *qi* or Hinduism's *prana*? What, that is, does the genealogy of energy—the "history of the present," to use Foucault's oft-cited term—teach us about its possible futures?

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An exception to political theory's general avoidance of the Anthropocene is the field of new materialism, with which Daggett's book is in conversation. It is a research agenda to which the political theorist William Connolly has contributed a series of related works over the past decade. The three essays in *Climate Machines, Fascist Drives, and Truth* are the latest installment, blending analysis and speculation in pondering the meaning of politics on a turbulent earth, the relationship of social and natural factors in shaping our world, and the meaning of truth today. (Although the book begins with Donald Trump, fascist drives lurk only around the edges.)

The major tradition of Western thought is a sociocentric one, Connolly argues in the first essay, elaborating on ideas developed in his (2017) *Facing the Planetary: Entangled Humanism and the Politics of Swarming.* Sociocentrists disagree about many things, but their thought is underpinned by the idea that the world is social relations all the way down: natural processes are mere background conditions that can be manipulated as humans please. Most of the central thinkers of the Western canon are sociocentrists—Kant, Hegel, Weber, Rawls, and Habermas, to name just a few. Yet there is also, Connolly argues, a minor tradition of "entangled humanists" (p. 40) who disavow human exceptionalism, note the capacities of nonhuman beings and processes, and recognize the limits of human mastery. Their numbers include Spinoza, Nietzsche, Donna Haraway, and the three thinkers examined in this essay: the philosopher Bernard Williams, the playwright Sophocles, and the novelist Mary Shelley. Williams, Connolly argues, saw in the tradition of Greek tragedy an important reminder that the world is not disposed toward human well-being or happiness: the order of things is not made by us or for us. The significance of nonhuman processes is visible in the dramas of Sophocles, where earthquakes, lightning, and thunder play central roles—not merely as symbols of divine anger but also as volatile material forces that can thwart human intentions. Shelley wrote her famous novel *Frankenstein; or, the Modern Prometheus* during the chilly and eerie summer of 1816, darkened by the aftermath of the eruption of Mount Tambora in Indonesia a year earlier and half a world away. In the story, nature and culture collapse into one another in a way that reflects the conditions of its writing: the realization that something seemingly as stable as the seasons could collapse, the complicated relationships among Shelley's human companions, and her alertness to the ice, oceans, rivers, and ledges of the European countries where monster and doctor roamed.

The second essay offers an alternative to sociocentrism via Deleuze and Guattari's notion of the "abstract machine" (Gilles Deleuze and Félix Guattari, *A Thousand Plateaus*, 1980), a concept that Connolly argues can "cut off sociocentrism at the pass" (p. 48) by recognizing processes that include but exceed human agency. Connolly develops the idea of a "climate machine" comprised of a vast array of human and nonhuman agents, forces, triggers, and amplifiers: cyclical drivers like sunspot formation and the "wobble of the earth" (p. 65); noncyclical drivers like volcanic eruptions and wildfires; triggers like CO_2 emissions and deforestation; and amplifiers like warming tundra that releases methane. The climate machine is clearly comprised of both human and nonhuman forces— but also of forces operating on inhuman time scales alongside those that unfold rapidly and often unexpectedly. Connolly grants that capitalism is one of many drivers of the climate machine, yet he rejects the Capitalocene framing proposed by Jason W. Moore (*Capitalism in the Web of Life,* 2017) and adopted by other eco-Marxist thinkers. After all, he observes, noncapitalist societies both ancient and modern have also had to contend with the plural agencies of our lively world, and many have not acquitted themselves well in doing so. We must therefore question not only capitalism but also other modern projects organized around fossil fuel consumption.

In the final essay, Connolly grapples with the challenge to truth posed by "fake news" and the blame directed at postmodernists by way of an imagined conversation between the theorist Michel Foucault (here figured as the character *F*) and the philosopher of science Alfred North Whitehead (*W*). Foucault argued that "regimes of truth" shape what forms of knowledge are produced and accepted, while Whitehead's process philosophy argued for understanding the world as in a state of constant becoming, rather than as a stable equilibrium; Foucault is more attuned to the social structures that shape human behavior, Whitehead to the imbrications of nature and culture. Yet for both, individual humans are only one small part of larger processes and relationships. *F* and *W* cover topics ranging from the gender binary to the invasion of Iraq, from the discovery of mirror neutrons to the shock the Holocaust posed to ideas of progress, all the while asking this question: How can we both hold out a positive vision of truth and remain open to the "creativity" of a world that exceeds our attempts to know it (p. 78)? Any working theory of the world, *F* and *W* declare, will encounter "loose ends" and "noise," to which it must remain responsive: no truth can ever be final. Although often illuminating, their conversation is rarely conclusive. *F* gets the last word of the book: "critique is both essential and insufficient. Positive action is also imperative" (p. 97). Yet although Connolly's sense of ecological urgency is evident in such gestures to action throughout the book, the vision of what "positive action" might entail remains hazy. How, for example, might climate activists put "internal and external pressure on pivotal states, corporations, churches, universities, localities, banks, and unions at the same time" (p. 71), as Connolly suggests at one point, and to what effect?

Instead of digging into such details, however, Connolly tends to zoom out to the grander scales of history on which geological processes unfold. This expansive temporal sweep offers an unusual and often edifying way of bridging a field typically divided into ancient and modern thought.

By reading moments like the Roman Climate Optimum, between 200 BCE to 50 CE, alongside the 1815 eruption of Mount Tambora, Connolly reminds us of the continuity between the deep past and our present: we have always been inhabitants of a dynamic planet that shapes our politics in unrecognized ways. (His geographic scope, however, ranges less widely: both historical examples and cited theorists remain squarely within European bounds.) Yet the frequent shifts in time and perspective can also be disorienting, sketching an impressionistic vision of "imbrications between volatile planetary forces and turbulent social processes" (p. 64) but never quite elaborating the details of how they interact.

Similarly, Connolly tends to offer glimpses of the complicated relationships that shape our world through long lists of the entities involved: the climate machine, for example, comprises, among other things, "capitalism, white evangelicalism, techno-scientific formations, imperial patterns of trade and finance, tectonic plates, ressentiment, species evolution, viral and bacterial flows, desert advances, ocean currents, acidification, and glacier flows" (p. 50). Although such catalogs help concretize the abstract "forces and agencies" of the climate machine, they offer little clarity as to how precisely these agents relate to one another, how powerful they are, or how they might be reorganized. Those already skeptical of new materialism's tendency to "flatten" power differentials into horizontal networks of relationality will likely remain unconvinced.

This is a shame, because Connolly is right that political theorists must learn how to take the nonhuman world into account. As I write, an emergent nonhuman agent, a recently discovered coronavirus, is spreading a new disease, COVID-19, around a globalized world. So far it has sickened and killed hundreds of thousands of people and caused unprecedented economic disruption that has sent unemployment skyrocketing and oil prices plummeting. Its political aftershocks will be significant and lasting. Like other recent pandemics, COVID-19 emerged from an interface between human and nonhuman animals mediated by the growth of industrial food production, the commodification of "wild" subsistence foods, the partial urbanization of rural and uncultivated spaces, and global patterns of travel and trade. Climate change is expected to exacerbate the spread of disease, as changing ecosystemic conditions allow organisms to travel and morph in new and unexpected ways. Political theorists need tools for thinking about these kinds of agents and their interactions with the human institutions, actions, and organizations that we are more used to considering. Such more-than-human disasters also present a challenge for positive political projects: How can we face the "tragic" nature of political action that we do not control, in a world not oriented toward our well-being, and nevertheless make decisions about how to act? Those who attempt to join Connolly in taking these questions seriously may find themselves in need of further guidance.

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Although these books touch on related themes and reference many common sources—mostly drawn from fields other than political science—they offer different visions as to where political theorists concerned with the issues raised by the Anthropocene should focus their energies. Connolly argues that we must "rethink old ideals from the ground up" (p. 64); Daggett similarly argues for interrogating our received concepts and ways of knowing. By contrast, Kelly suggests that, although the Anthropocene poses vexing new challenges to our politics, it is perhaps better read as an exacerbation of existing dynamics and paradoxes than an entirely new kind of problem. Although sympathetic to both propositions, I tend to think Kelly's direction is more promising. We surely do need to revise our understandings of energy, agency, truth, and many other problematics that Daggett and Connolly raise. But we also must struggle to realize changes in the world as it is—and that will require thinking about how the new ideas and new agencies thrown up by the "climate machine" are likely to collide with existing institutions and ideologies, which are no less real for being constructed.

This task is lent urgency, of course, by the rapid progression of climate change. Climate change is only one part of what the Anthropocene represents, but it is clearly the reason why the concept has garnered so much attention. Thus far, it is occurring more rapidly than scientists had predicted; instead of representing a problem of the distant future, its effects are now being felt in much of the world and will only intensify. So, if the Anthropocene demands recalibration of timelines to encompass both the deep geological and fluctuating political, it might also require temporal recalibration among concerned academics, such that we orient ourselves toward pressing present and future political questions. If the crisis before us is as urgent as each of these books suggests, perhaps we might consider what the strengths of academic research might offer to the political projects we tend to call for in conclusions and epilogues. How, for example, might engagements with empirical political science, the history of social movements, and utopian visions inform a new energy politics or help build the "cross-regional, eco-egalitarian social movements" that Connolly calls for? What might we draw from recent Indigenous thought and struggles about both political strategy and more-than-human worlds? On these matters, political theorists—all political theorists—have much to offer and also much to learn. After all, one lesson these books share is that climate change is not something one can simply choose to be interested in or not.