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## **REVIEW ESSAYS**

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### **Politics of Nature: A Review of Three Recent Works by Bruno Latour**

Bruno Latour: *Politics of Nature: How to Bring the Sciences into Democracy*. Cambridge, MA: Harvard University Press, 2004a.

Bruno Latour: "Why Has Critique Run Out of Steam? From Matters of Fact to Matters of Concern," *Critical Inquiry*, 30, 2, 2004b.

Bruno Latour: *War of the Worlds: What About Peace?* Chicago: Prickly Paradigm, 2002.

Bruno Latour is widely known for his contributions to science studies,<sup>1</sup> debates about postmodernism,<sup>2</sup> and, through the spread of his "actor-network theory,"<sup>3</sup> methods in the social sciences. While one can draw connections between these works, it is hard to pigeonhole Latour. His originality, style of argumentation, and aversion to being defined vis-à-vis other thinkers make Latour enigmatic. More recently, Latour has called into question elements of his earlier project, arguing in his 2002 treatise, *War of the Worlds: What About Peace?*, that critique has "overshot its target"<sup>4</sup> and asking "why has critique run out of steam?" in a 2004 essay of the same name.<sup>5</sup> That puts Latour, who urged us to follow scientists to understand social life, under the microscope himself.

Latour's *Politics of Nature: How to Bring the Sciences Into Democracy*,<sup>6</sup> (hereafter "*Politics*") comes to the English-reading audience in the midst of the debate over Latour's doubts about critique. This coincidence is auspicious, since it allows us to

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<sup>1</sup>See especially Bruno Latour and S. Woolgar, *Laboratory Life: The Social Construction of Scientific Facts* (Los Angeles: Sage, 1979); Latour, *Science in Action: How to Follow Scientists and Engineers Through Society* (Cambridge, MA: Harvard University, 1987); and Latour, *Pandora's Hope: Essays on the Reality of Science Studies* (Cambridge, MA: Harvard University Press, 1999a).

<sup>2</sup>Latour, *We Have Never Been Modern* (Cambridge, MA: Harvard University Press, 1991).

<sup>3</sup>Latour, "The Trouble with Actor-Network Theory," *Philosophia*, 25, 3–4, 1997; and Latour, *Reassembling the Social: An Introduction to Actor-Network Theory* (Oxford: Oxford University Press, forthcoming).

<sup>4</sup>Latour: *War of the Worlds: What About Peace?* (Chicago: Prickly Paradigm, 2002).

<sup>5</sup>Latour, "Why Has Critique Run Out of Steam?: From Matters of Fact to Matters of Concern," *Critical Inquiry*, 30, 2, 2004b.

<sup>6</sup>Bruno Latour: *Politics of Nature: How to Bring the Sciences into Democracy* (Cambridge, MA: Harvard University Press, 2004a); Latour, *Politiques de la Nature: Comment Faire Entrer les Sciences en Démocratie*, Paris: La Découverte, 1999b.

read the recent post-critical essays alongside Latour's most important work since *We Have Never Been Modern*.<sup>7</sup> *Politics* is an often brilliant attempt to theorize "political ecology," a philosophical project with two broad aims. On one hand, it attempts to overcome the concept of nature as an asocial, objective source of truth. For Latour, this concept of nature is "the result of a political division" that identifies nature with "what is objective and indisputable" and collects all that is "subjective and disputable" under the guise of the *social*.<sup>8</sup> Since nature is treated as the external real world, appeals to nature situate actors within a political order in which non-human actors cannot speak, and certain spokespeople (scientists, moralists) are privileged at the expense of others. Political ecology is therefore a critique of actually existing environmental politics, which claims to speak for nature. To practice political ecology is *not* to bring more "Science" to bear on "Nature" (terms often capitalized by Latour to emphasize their singularity) and promote conservation. Rather, Latour's political ecology means "the destruction of the idea of nature"<sup>9</sup> and the politicization of practices that naturalize.

This brings us to political ecology's second aim: to recognize the complex associations of entangled socio-natural beings, instruments, and practices that constitute different natures. Political ecology endeavors to produce new collectives of facts, values, and practices that will allow plural actors – humans and non-humans – to speak about common "matters of concern."<sup>10</sup> Latour takes the sciences as the model for this experimental work, which entails creating more well-articulated collectives that "include more articles. . . [and] mixes them together with greater degrees of freedom."<sup>11</sup> This second aim includes both a descriptive and a normative aspect. The descriptive element lies in the adoption of the appropriate approach to recognize the modern, complex world for what it is: instead of speaking for "Nature," political ecology seeks to recognize and extend the complexes of humans, non-humans, facts, and values that comprise particular natures. For Latour, reality exists, but it is neither unproblematic nor singular, subjective nor objective; realities are experimentally constituted as ensembles of practices and human and non-human actors. Consider the following illustration:

Let us suppose that a cellar in Burgundy invites you to a wine tasting. . . [I]n the course of an hour or two you are going to become sensitive, in the process of continually comparing wines, to differences of which you were completely ignorant the day before. The cellar, the arrangement of glasses on the barrel, the notation on the labels, the pedagogy of the cellar master, the progress of the experimental procedure all contribute to forming an instrument that allows you . . . to acquire a nose and palate . . . . Let us suppose that you are then asked to go into the laboratory and discover, in a white-tiled room, a complex instrumentation that is said to allow you to connect the distinctions that you have

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<sup>7</sup>Latour, 1991, *op. cit.*

<sup>8</sup>Latour, 2004a, *op. cit.*, p. 231

<sup>9</sup>*Ibid.*, p. 25.

<sup>10</sup>*Ibid.*, p. 114.

<sup>11</sup>*Ibid.*, p. 86.

just sensed on your tongue with other differences, here recorded in the form of peaks or valleys on graph paper or a computer screen. ...[W]e no longer want to say that the first tasting is subjective...while the second is objective. ...Thanks to the cooper, thanks to the gas chromatographer, we have become sensitive to differences that were invisible before, some on our palate, others on logarithmic paper. We have gone beyond connective sensations, words, calculations to a pre-existing external thing; thanks to the multiplication of instruments, we have become capable of registering new distinctions. In the production of these differences and in the multiplication of these nuances, we must thus count ourselves and our noses, ourselves and our instruments. The more devices we have at our disposal, the more time we spend in the cellar. . .the more realities abound.<sup>12</sup>

Latour's account of the production of the wine differences does not reflect a social explanation of the way a subject approaches an object; nor is this a story of "social construction" of wine differences with no objective qualities. Yet the truth of these differences is neither strictly subjective ("taste") nor objective ("scientific fact"). In Latour's view, "reality grows"<sup>13</sup> as actors, practices, propositions, and instruments create new coalitions of fact and value, being and recognition. The nose and palate, lab instruments, logarithmic paper, and wine constitute a reality.

Though Latour's political ecology is descriptive, insofar as it provides a way of approaching particular natures (as with the wine differences), it is equally a *normative* project. This is clearest in the second half of *Politics*, where political ecology collides with liberal-democratic political theory. By bringing the sciences into democracy, Latour feels that we will create the conditions for a more democratic and just world. *Politics* reveals that the Constitution called for at the conclusion of *We Have Never Been Modern*<sup>14</sup> is both a means of describing the actual constitution of the world and a political constitution. Drafting this constitution entails addressing the problems of politics, science, speech, and ecology together:

Not a single line has been written – at least within the Western tradition – in which the terms "nature," "natural order," "natural law," "natural right" – have not been followed. . .by an affirmation concerning the way to reform public life. . .When one appeals to the notion of nature, *the assemblage that it authorizes counts for infinitely more than the ontological quality of "naturalness," whose origin it would guarantee.*<sup>15</sup>

Overcoming the political effects of this metaphysical affiliation will require that we "put into play" the four concepts that have structured Western thought about environmental politics: "*oikos, logos, phusis, and polis.*"<sup>16</sup> With this claim – *Politics'*

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<sup>12</sup>*Ibid.*, pp. 84–5.

<sup>13</sup>*Ibid.*, p. 85.

<sup>14</sup>Latour, 1991, *op. cit.*

<sup>15</sup>Latour, 2004a, *op. cit.*, pp. 28–9.

<sup>16</sup>*Ibid.*, p. 2.

most daring thesis – Latour suggests the destructuring of the metaphysical tradition that has linked truth and politics through nature.

Unfortunately, Latour’s way of proposing that we take up such work is disappointingly formulaic and idealist. The overarching narrative of *Politics* aims at joining these three critiques of Nature, Science, and politics: as Science gives way to *the sciences*, as Nature loses its grip as the singular basis of truth, and as non-human nature becomes part of political life, then politics will be more just. For Latour, every advance in the philosophical destruction of “Nature” reflects progress for political ecology *qua* political project:

By refusing to tie politics to humans, subjects, or freedom [as in humanist political philosophy], and to tie Science to objects, nature, or necessity, we have discovered the work common to politics and to the sciences alike: stirring the entities of the collective together in order to make them articulable and to *make them speak*. There is nothing more political than this activity, and nothing more scientific.<sup>17</sup>

Making collectives that can speak is a reasonable goal, and arguably a political one. But whereas Latour argues persuasively for the theoretical importance of such work, he never offers an equivalent explanation for why this should be a political priority. Instead he produces a kind of constitution made up of political roles, forms of power, collective requirements, and responsibilities to different actors in a manner that is stultifying in its wonkishness: in Box 3.1, for instance, we find his recapitulation of “the two forms of power and the four requirements that must allow the collective to proceed according to due process to the exploration of the common world.”<sup>18</sup> Readers who are not put off by the tone of Latour’s rules of order may wonder how he expects these requirements to be met (e.g., #2: “make sure the number of voices that participate. . . is not arbitrarily short-sighted,”; #4: “once the propositions have been instituted, you shall no longer question their legitimate presence”).<sup>19</sup> These metaphorical powers are presented with no analysis of the barriers that exist to their actual existence and no discussion of how they might come into being. Latour rarely mentions his sources in the main text, but his theory of “experimental deliberation” seems to be the product of joining Habermas’s theory of communicative rationality with the political theory of John Dewey. From Dewey, Latour borrows the notion of a public-state relation that is not *a priori* but experimentally produced,<sup>20</sup> and Latour’s emphasis on making articulate collectives simply translates Habermas’s

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<sup>17</sup>*Ibid.*, p. 89.

<sup>18</sup>*Ibid.*, p. 109.

<sup>19</sup>*Ibid.*

<sup>20</sup>In *The Public and its Problems*, Dewey argues that what matters in any human association is “how they come to be connected” and that the scope of the state’s functions is to be “experimentally determined” (J. Dewey, *The Public and its Problems* (New York: Henry Holt, 1927, p. 74). On Latour’s use of Dewey, see: 271 n8, 275 n30 and n34, 280 n20, and 281 n25. Note that all of these citations appear in the footnotes; Dewey is never (to my knowledge) actually discussed in the main text. The same is true of Habermas: cf. pages 262 n16, 263 n21, 266 n6, and 281 n22. The only reference to Habermas in the main text is on p. 171.

principle of discourse ethics – “Only those norms can claim to be valid that meet (or could meet) with the approval of all affected in their capacity as *participants in a practical discourse*”<sup>21</sup> – in a way that includes non-humans.<sup>22</sup>

As the argument unfolds and the lists of “skills,” “powers,” and “roles” accumulate, the humor and clarity of the early chapters fade, and *Politics* becomes pedantic and tediously repetitive. Concrete illustrations, such as the wine cellar, are rare. And Latour’s neologisms steadily proliferate so that one reads through an increasing density of internally referring terms (*Politics* includes a glossary with definitions of no less than 68 Latourisms). These points provide a clue to the book’s major weaknesses. *Politics* offers a philosophical system with its own language and logic that lacks worldliness. It’s nice to imagine, as Latour beckons, “that a cellar in Burgundy invites you to a wine tasting,”<sup>23</sup> but what does this have to do with political struggles? Latour never deigns to apply his approach to a complex historical-political situation. The grand metaphor that sustains *Politics of Nature* – that opening the sciences broadens democratic possibilities – proves to be an empty gesture. The problem is not that Latour is simply too philosophically abstract. It is that his shift to a political register is asserted with so little historical and theoretical care that one cannot but demand some stronger arguments and illustrations.

Herein lies *Politics’s* major failure. Latour does not inquire into the political and historical conditions under which realities actually emerge – outside of the wine cellar. The thorny problems of power, discourse, and history are wholly elided. In turning towards Habermas’s communicative approach to political ethics, Latour does not ask *why* only certain actors can speak effectively. He has no way to account for the interests of the scientists he encourages us to follow. His discussion of the state<sup>24</sup> is arguably the weakest section of *Politics*. Citing Dewey’s experimental view of the public-state relation, Latour sets himself against all “totalizing definitions of the State.”<sup>25</sup> But rather than exploring, in non-derivationist fashion, why the capitalist state tends to adopt the liberal-democratic form,<sup>26</sup> Latour presupposes the impossibility of any non-deterministic Marxist account of politics.<sup>27</sup> Of all of Marxism, Latour says “its goal was not to rehabilitate politics [!] but to subject it still further to the laws of . . . Science.”<sup>28</sup> The fact that Latour dodges a serious confrontation with

<sup>21</sup>J. Habermas, “Discourse Ethics,” in *Moral Consciousness and Communicative Action* (Cambridge, MA: MIT Press, 1990), p. 185. Republished in J. Habermas, *The Habermas Reader* (Cambridge, UK: Polity, 1996), pp. 180–192.

<sup>22</sup>Latour, 2004a, *op. cit.*, p. 262 n21.

<sup>23</sup>Latour was born into “a wine family in Burgundy not Bordeaux” according to his web page: [http://www.ensmp.fr/PagePerso/CSI/Bruno\\_Latour.html/faq-en.html](http://www.ensmp.fr/PagePerso/CSI/Bruno_Latour.html/faq-en.html).

<sup>24</sup>Latour, 2004a, *op. cit.*, pp. 200–209.

<sup>25</sup>*Ibid.*, p. 281.

<sup>26</sup>See, for example, B. Jessop, *State Theory: Putting the Capitalist State in Its Place* (Cambridge: Polity Press, 1990).

<sup>27</sup>Latour, 2004a, *op. cit.*, p. 267 n9.

<sup>28</sup>*Ibid.*, p. 271 n10; see also 281 n24.

Marx<sup>29</sup> leaves open the question of whether it is possible to weave his approach to scientific practices with a nuanced, historically informed approach to power.<sup>30</sup>

### The repudiation of critique?

Do you see why I am worried? I myself have spent some time in the past trying to show the “lack of scientific certainty” inherent in the construction of facts. [...] But I did not exactly aim at fooling the public by obscuring the certainty of a closed argument – or did I? ...I’d like to believe that, on the contrary, I intended to *emancipate* the public from a prematurely naturalized objectified fact. Was I foolishly mistaken?<sup>31</sup>

These weaknesses of *Politics* cast light on Latour’s recent doubts about whether critique has gone too far.<sup>32</sup> These concerns emerged in *War of the Worlds*<sup>33</sup> and were elaborated in “Why Has Critique Run Out of Steam?” Latour’s anxieties are piqued by two facts – or rather the interpretation of two facts. On one hand (the right), he is faced with denial by U.S. Republicans of the truth about global warming. On the other hand (the left) appear critical interpretations of September 11, 2001. Latour finds a frightening parallel between these two situations. In each case the project of complicating the facts about facts – i.e., being critical about knowledge – has gone too far. Since social construction has gotten out of hand, we have lost our ability to say what’s what. “Why does it burn my tongue to say that global warming is a fact whether you like it or not?” Latour demands. “Why can’t I simply say that the argument is closed for good?”<sup>34</sup>

<sup>29</sup>Latour also avoids Derrida. I agree with Timothy Mitchell that Latour’s “brief dismissal of Derrida” in *We Have Never Been Modern* is “disappointing” (T. Mitchell, *Rule of Experts: Egypt, Techno-politics, Modernity* (Berkeley: University of California Press, 2002), p. 309). Latour’s failure to address Derrida’s critique of Western metaphysics and its treatment of truth and nature in *Politics* is even more unfortunate, cf. J. Derrida, *Of Grammatology*, G. Chakravorty Spivak, trans. (Baltimore: Johns Hopkins University Press, 1976). As with his broadsides against Marxism, Latour criticizes Derrida – for being critical! – and yet without engaging with his arguments. Latour asks: “Since September 2001 . . . [does] idle criticism not look superficial now that nihilism is truly striking at ‘us’ – at US – putting what we call civilization in great danger of being found hollow? Who needs to add another deconstruction to a heap of broken debris?” (*War of the Worlds*, p. 1–2). The same question reappears in the opening of “Why Has Critique Run Out of Steam?”: “Is it really the task of the humanities to add deconstruction to destruction [after 9/11]?” (Latour, 2004b, *op. cit.*, p. 225). For Derrida’s reading of 9/11 – more rigorous than Latour’s – see J. Derrida, *Philosophy in a Time of Terror: Dialogues with Jürgen Habermas and Jacques Derrida* (Chicago: University of Chicago Press, 2003).

<sup>30</sup>As for instance in the work of Donna Haraway (see D. Haraway, *The Haraway Reader* (New York: Routledge, 2003). Haraway is only cited once by Latour in *Politics* (260, n58) – without dwelling on her socialist and feminist politics.

<sup>31</sup>Latour, 2004b, *op. cit.*, p. 227. Quotations taken from the longer version of the essay published in *Critical Inquiry*. Read alongside *Politics*, the version of “Why Has Critique Run Out of Steam?” published by *Harper’s* feels like a paranoid rant. In its six paragraphs the reader is pummeled relentlessly by more than 40 questions.

<sup>32</sup>Latour, 2002 and 2004b, *op. cit.*

<sup>33</sup>Essentially an abstract of *Politics*, *War of the Worlds* was published as a slender book by Prickly Paradigm. As compared with *Politics* it makes for quick reading, since Latour does not have room to introduce his terms, rules, and powers. *War of the Worlds* could be substituted for *Politics* in the classroom.

<sup>34</sup>Latour, 2004b, *op. cit.*

One reason the argument isn't over is because, as Latour knows, the ensembles of actors, facts, values, and effects woven through the global climate change debate are vast and complex. Close up one fact and others open. But a second reason the warming debate continues – one Latour is apparently unwilling to accept – is that certain powerful groups keep it open against better reason. Such an answer presupposes, of course, a theory of class interests, and for Latour such explanations are no more than conspiracy talk:

[W]hat's the real difference between conspiracists and a popularized, that is a teachable version of social critique inspired for instance by a too quick reading of . . . Pierre Bourdieu? In both cases, you have to learn to become suspicious of everything people say because "of course we all know" that they live in the thralls of a complete *illusio* on their real motives. Then, after disbelief has struck and an explanation is requested for what is really going on, in both cases again, it is the same appeal to powerful agents hidden in the dark acting always consistently, continuously, relentlessly. Of course, we in the academy like to use more elevated causes – society, discourse, knowledge-slash-power, fields of forces, empires, capitalism – while conspiracists like to portray a miserable bunch of greedy people with dark intents, but I find something troublingly similar in the structure of the explanation. . . . What if explanations resorting automatically to power, society, discourse had outlived their usefulness?<sup>35</sup>

Latour seems to feel that the Left is incapable of doing anything except attributing the world's problems to invisible forces. This is a rude caricature of critique, but one Latour applies to everyone from Marx to Derrida. What distinguishes conspiracy theories from historically and theoretically informed accounts is precisely the refusal, by the latter, to be satisfied with reductive theories that account for everything. One of the main tasks of critique is to discern between the strengths of different explanations; the mark of conspiracy is the lack of rigor and evidence. The solution to the dilemma Latour notes here is simply to struggle against just such facile accounts of power that attribute problems to "powerful agents hidden in the dark."

But precisely this sort of critique is foreclosed by Latour, who is allergic to attempts to think through the connections between, for instance, capitalism and violence. The question of September 11 figures prominently in his recent essays. He asks: "What has critique become when. . . Baudrillard claims in a published book that the World Trade Towers destroyed themselves under their own weight. . . undermined by the utter nihilism inherent in capitalism itself – as if the terrorist planes were pulled to suicide by the powerful attraction of this black hole of nothingness."<sup>36</sup> As Latour's critique of critique hinges largely on this reading of Baudrillard's essay, this reading is worth pursuing. Unfortunately, Latour does not say exactly where Baudrillard makes

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<sup>35</sup>*Ibid.*

<sup>36</sup>*Ibid.*

the purported claim. As far as I can tell, the passage that piques his outrage comes from the end of Baudrillard's essay, "Requiem for the Twin Towers:"<sup>37</sup>

The collapse of the towers is the major symbolic event [of September 11]. Imagine they had not collapsed, or only one had collapsed: the effect would not have been the same at all. The fragility of global power would not have been so strikingly proven. The towers, which were the emblem of that power, still embody it in their dramatic end, which resembles a suicide. Seeing them collapse themselves, as if by implosion, one had the impression that they were committing suicide. . . . Were the Twin Towers destroyed, or did they collapse? . . . The architectural object was destroyed, but it was the symbolic object which was targeted and which it was intended to demolish. One might think the physical destruction brought about the symbolic collapse. But in fact no one, not even the terrorists, had reckoned on the total destruction of the towers. It was, in fact, their symbolic collapse that brought about their physical collapse, not the other way around. . . . The symbolic collapse came about, then, by a kind of unpredictable complicity – as though the entire system, by its internal fragility, joined in the game of its own liquidation, and hence joined in the game of terrorism. . . . [T]he increase in the power of power heightens the will to destroy it. . . . [I]t was party to its own destruction.<sup>38</sup>

Without defending Baudrillard, it is clear that Latour's gloss on Baudrillard ("the Towers destroyed themselves") grossly oversimplifies the argument. To be fair, Baudrillard's argument is vague (e.g., where he claims that "it" was party to its own destruction, it is unclear whether "it" refers to "the power of power" or "the entire system"). But Latour hardly improves the situation by failing to cite Baudrillard and by glossing over the distinction between the *symbolic* collapse of power and the destruction of the Towers as architectural *objects*. Latour's criticism thus has the appeal of vulgar realism: "if Baudrillard can't see the obvious, that the buildings were destroyed by terrorists, then critique has gone too far!" Whether or not one accepts Baudrillard's reading, we should recognize what is at stake in Latour's attack: the brute rejection of any attempt to interpret an event like September 11 with concepts like power, capitalism, and hegemony. Even Marxists who cannot abide Baudrillard's postmodernism should see the danger here.

The question Latour could have raised is central to critical theory: how should we understand the ways discourses, empires, or capitalist social relations contribute to the constitution of "realities?" Such a question could be raised more strongly after *Politics of Nature*, and yet Latour wants to foreclose this discussion. Ironically, it is precisely because arguments about the causes of global warming or September 11 cannot be closed off that these critical tools must be sustained: the things Latour worries over are concepts needed to build politically effective collectives. – **Joel Wainwright**

<sup>37</sup>J. Baudrillard, "Requiem for the Twin Towers," in *The Spirit of Terrorism*, C. Turner, trans. (New York: Verso, 2002).

<sup>38</sup>*Ibid.*, pp.47–49.



Matthew Gandy: *Concrete and Clay: Reworking Nature in New York City*. Cambridge MA: MIT Press, 2002.

This is a book about the social production of nature in New York City over almost two centuries. It suggests a certain maturity to ideas about the production of nature which first emerged in the 1980s in quite theoretical form but which have since then been translated into more and more palpable accounts of the daily environments, urban and rural, in which the vast majority of us live. It chronicles the dramatic ecological transformation and expansion of New York City since the early 19<sup>th</sup> century through the lenses of urban history, offering a sequence of interlocked environmental episodes as a central thread to the politics of urban change. For those interested in a critical urban environmentalism, this book is a pivotal text.

An accessible theoretical introduction straps the ensuing argument to an eclectic range of contemporary social theory while eschewing a narrowly idealist social constructionism. As its title suggests, *Concrete and Clay* is about the water and asphalt of urban change, the spaces and skyscrapers of the city, as well as the social struggles and language that make and frame the changing nature of the city. Capitalist urbanization is a massive project in nature: this book attempts “to build a conception of urban nature that is sensitive to the social and historical contexts that produce the built environment and imbue places with cultural meaning.”

The story of bringing water to “the most thirsty of all great cities,” as Jean Gottmann once called New York, is presented in the substantive first chapter. It tracks water needs and supply from the quickly fetid wells of Lower Manhattan’s Collect Pond, built after the 17<sup>th</sup> century, to the astonishing infrastructure constructed between the 1830s and 1970s that accessed water from the Croton and, later, Catskill reservoir systems. These huge hydraulic construction projects, largely invisible or illegible on the urban surface – tunnels and aqueducts, pumping stations and reservoirs, water pipes and household plumbing – effectively urbanized the hydrological cycle while hydrologizing the city’s social economy, welding the natural cycle with cycles of social, economic and political change in order to provide water for the city’s 8 million people. If this brought a certain democratization of nature – water for all – it was driven first and foremost by a search for efficiency in the production of urban space and nature for capital accumulation. As important as the provision of drinking water was the need for water to flush pollution and put out fires. Today therefore, the global campaign to privatize water – costing lives on several continents – is consistent with the longer term logic of water provision as a vehicle for capital accumulation, even if neoliberalism brings a shift from public to private ownership. The recent degeneration of New York’s water system notwithstanding, the trend and temptation of privatization has been opposed.

The carving out of Central Park in the 1850s is the focus of Chapter 2. This grand production expressed another crux of social and natural circulatory power: the circulation of aesthetic ideas a lá the “greensward” envisaged by Olmsted and Vaux; of purified air for the masses; and of profit-seeking capital for the bourgeoisie. In an early example of environmental gentrification, Central Park planners designed the new

landscape architecture, planted 270,000 trees and shrubs, and displaced 1,600 poor New Yorkers. They constructed a “first nature” landscape as urban commodity, hiking real estate prices all around. Attempts to tightly control the behavior of park visitors – no sports, no vagabonds, etc. – fell short from the start as the populace asserted its own rights to the park. That struggle continues today as City Hall, in unison with the effete Central Park Conservancy, has effectively privatized park management and selectively denied access to the people (most recently denying the right of protest there during the 2004 Republican National “Convulsion”). Disney gets the park on lucrative request while anti-war demonstrators are refused.

The primacy of the park as the “lungs of the city” was, however, supplanted decades earlier, Chapter 3 informs readers, as the ex-urban edge was opened up by a system of bridges and “parkways.” The language is important insofar as the experience of driving was intended to replicate, at speed, a park visit. Where the entire country had only 8,000 cars in 1900, New York City alone had 1.3 million vehicles only a quarter of a century later. Much has been made of the role of Robert Moses in building the asphalt network to accommodate these cars, and despite his early lionization of a meld of technology and nature, he eventually came to boast that he needed to “hack” his way through the city itself “with a meat ax.” Gandy is astute at recognizing the breadth yet limitations to the power of this much-vaunted figure.

Chapter 4 presents the story, not widely remembered today, of the Young Lords, Puerto Rican community activists turned revolutionaries in the late 1960s and early 1970s. The Young Lords mobilized Puerto Ricans and others around issues of local health care, jobs, drugs and environment and presented a broader vision, with women increasingly in the vanguard, for a different kind of city. For Gandy they may have strayed into a fateful campaign for Puerto Rican independence, but they also represented the true, if unheralded, roots of the later environmental justice movement. The final chapter takes on the question of waste, raising the specter of New York City as a waste economy in which recycling, incineration and the export of garbage are not simply a means of environmental control and regulation but also a source of profitability – environmentalism makes money. The current mobilization of people and neighborhoods around environmental issues in the city challenges this pecuniary rationale but is largely confined to a single-issue politics and does not coherently challenge the larger systems of social and political power – capitalist urbanization.

Some of the individual stories in this book – water, roads and garbage for example – are already quite well known, but the originality of *Concrete and Clay* is the combination of such stories into a larger picture of the politics of the production of urban nature. It is broadly successful, engagingly written, and trenchant in conveying a broad canvas of the produced nature we all live in. At times it flattens into a more *sui generis* urban history in which the environmental thread is opaque. And although I share and applaud Gandy’s commitment to demonstrating the imbued environmentalism of that history, I also think that in the present moment, it might have been politically useful to pull out a bit more explicitly the nature amidst the urban.

The struggle since the 1990s over New York's community gardens, which Gandy does mention, is one such obvious opening. A more explicit conclusion of the political implications of this urban environmental canvas – what does all this mean for the production of nature thesis? – would also have been useful.

Put differently, this book struggles with and expresses the larger dilemma that we all confront as scholars and activists concerned with the making of nature, namely how to meld a certain theoretical sophistication with the prosaic details of everyday life in the city. If it does not entirely resolve this dilemma, it does far better than almost any other such effort. In a very positive way, this book naturalizes the social production of nature by presenting it as a fact of everyday life, and it does so in a well-illustrated format with accessible prose that makes the book a tremendous teaching tool. It expands and politicizes how we think about the production of nature, and invites us to think about how this rich portrait reframes the politics of the production of nature per se. – **Neil Smith**

Vandana Shiva: ***Water Wars: Privatization, Pollution and Profit***. Cambridge: South End Press, 2002.

We know what to expect from Vandana Shiva. Her concerns with environmental exploitation, disappearing indigenous knowledges and global inequalities are constant themes in her previous work. *Water Wars* is no exception. In 156 pages, the charismatic Shiva takes her readers on a whirlwind tour of pressing global water issues, including water rights and markets, climate change, dams, privatization, irrigation, the Green Revolution, and water's sacredness. Drawing primarily on examples from India, but covering a wide geographic range nonetheless, Shiva aims to convince the reader of major problems currently facing and rapidly approaching the world's water drinkers and users. The book's adjunct materials include a water hymn from the *Rig Veda*, a map of India, notes at the ends of chapters, an appendix of the 180 names for the Ganges River, and a solid index.

Shiva's title, *Water Wars*, is explained in her preface: that water is fought over for a number of reasons ranging from conflicts about what water means to different groups to actual violence over ownership. Often these struggles are masked as other kinds of conflicts, such as ethnic or religious battles. Shiva states that in 20 years of research and activism, she has learned that "[e]conomic globalization is fueling economic insecurity, eroding cultural diversity and identity, and assaulting the political freedoms of citizens" (p. xii). These problems in turn, have led to fundamentalism, terrorism and insecurity. The solution, she says, lies in local, democratic institutions for self-governance of common property resources. The book's introduction discusses the conversion of the earth's abundant water resources into scarcity through misuse and overuse. Shiva posits that technical fixes suggested by mainstream development institutions erode community control, which leads to shortage. Markets are not the answer to this problem, she declares, because there is no alternative to water. Water's irreplaceability means certain populations are at greater risk.

Chapter 1 of *Water Wars* takes up the history of international water rights and laws. It introduces the reader to common property resources and the evolution of their governance in India. This is followed by a list of Shiva's nine principles of water democracy that markets cannot guarantee. In Chapter 2, Shiva introduces the reader to relationships between water, global climate disasters, industrial pollution, and environmental destruction (e.g., ravaging of mangrove swamps for aquaculture). Chapter 3, "The Colonization of Rivers: Dams and Water Wars," takes up conflicts over dams and water rights. The spread of U.S. historical water rights as a global paradigm is suggested. Shiva discusses the (il)logic behind large and small dams in the U.S. and India. She positions international conflicts, such as Israel versus Palestine, as water conflicts and gives the reader an expanded view of the scale of some battles through examples like disputes over the Nile in East Africa. The World Bank, the World Trade Organization and water's commodification come under fire in Chapter 4. This is the book's strongest chapter due to its clear organization. It traces links between international development aid, global trade agreements, water's privatization and the political and economic interests of global water powers, such as Suez Lyonnaise des Eaux. In Chapter 5, Shiva addresses the relationship of water and food, focusing specifically on the drawbacks of the Green Revolution and the dangers of monocultural cropping that decrease biodiversity and enhance risk, should crops fail. Chapter 6, "Converting Scarcity into Abundance," gives numerous Indian examples of the ways in which communities have historically tackled water shortage through indigenous technologies and governance systems. Finally, the historic sacredness of the Ganges River and other water bodies are illuminated, as is water's intrinsic value, in Chapter 7.

*Water Wars* does a number of things well. Besides introducing global water crises, it presents major figures in these conflicts (for example, Sunderlal Bahuguna, Baba Amte and Medha Patkar, who are fighting against dams on the Narmada River). Numbers and facts that successfully demonstrate the extent of the crisis are given throughout the book. Topics are introduced giving enough information for the reader to grasp and continue with Shiva's argument without getting bogged down in detail; for example, Shiva writes a bare-bones explanation of the hydrologic cycle (p. 2) before launching into examples of practices that lead to water crisis. Shiva is consistently strong when it comes to making simple, compelling arguments. Her convictions and experience energize the book's thrust that globalization and privatization threaten water security for those least able to withstand the strain. She meets her objective of demonstrating a range of water problems and their linkages to globalization, economic insecurity, diminished diversity (both biological and cultural) and curtailed freedoms.

But for this reader, her solutions are less compelling. Shiva romanticizes indigenous solutions to water problems and governance by glossing over power struggles that occur within communities, institutions and families. While aware of global forces, Shiva's suggestions idealize power relations at the local level or ignore them as a factor in unjust use. She upholds the wisdom of the ancients without due consideration of subsequent socio-economic changes and population pressures. Shiva is ever the

idealist, who trusts that local communities will do right. Her example of conflicts in East Africa over the Nile River contrast nicely with the more local problems she outlines, but such regional examples also present a dilemma for her continuous insistence that answers lie in local, traditional systems.

The book's reasonable price (\$14) and short chapters (maximum 34 pages) make it suitable for assignment as supplemental reading in undergraduate courses. However, the sheer range of topics and examples undermines the book's effectiveness for readers new to water crises. So does Shiva's use of so many terms in local languages and specific Indian examples without maps, pictures or descriptions. If students have poor geographic knowledge, it seems likely that much of the "local color" she includes will not resonate.

The book's structure is not laid out anywhere, nor is there an overview of each individual chapter's contents. This may explain (or be explained by) the failure of the text to congeal as a cohesive argument and the topical scatteredness within certain chapters, and occasionally even individual paragraphs. For example, Chapter 5, titled "Food and Water" and only nine pages long, discusses transnational corporations, genetically modified foods, drought resistant crops, industrial agriculture, the Green Revolution, unsustainability, salinization, water waste, peasant movements, the shrinking of the Aral Sea, and women in the Indian shrimping industry.

A similar book, Postel's *The Last Oasis*,<sup>1</sup> is much better organized and has greater depth and breadth. *Cadillac Desert*,<sup>2</sup> narrates the rich history and power struggles surrounding water and dams in the American West. Roy's *The Greater Common Good*,<sup>3</sup> about the Narmada Dam conflict offers a forceful argument, a terrific map, and statistical information in 62 pages of superior writing. These texts are forceful alternatives to *Water Wars*, especially if an instructor seeks a book that could be assigned in sections. In sum, *Water Wars* covers a multitude of global water topics, each infused with Shiva's engaging and personal style, but it is too superficial in its approach. – **Kathleen O'Reilly**

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<sup>1</sup>S. Postel, *Last Oasis: Facing Water Scarcity* (New York: W. W. Norton, 1992).

<sup>2</sup>M. Reisner, *Cadillac Desert: the American West and its Disappearing Water* (New York: Viking, 1986).

<sup>3</sup>A. Roy, *The Greater Common Good* (Bombay: India Book Distributors, 1999).

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