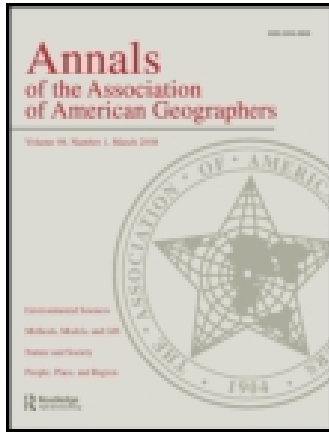


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On the Possibilities of a Charming Anthropocene

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The Anthropocene—the geological epoch in which human activities are signaled in Earth’s geological records—often appears as an age to be met with grim resignation. Anxiety-driven narratives about this era can translate into very material landscapes of surveillance, tightened borders, farmland acquisitions, and so on, landscapes where speculation shapes lived realities. This article proposes that instead of joining the chorus of dark predictions, or rejecting the flawed concept altogether, geographers are well positioned to experiment with articulating a different Anthropocene. Fragments of a beautiful Anthropocene are already under design: agroecology, green roofs and buildings, distributed renewable energy systems. Yet to weave together a vision compelling enough to provoke cultural and political change, other elements are necessary: a reawakened sense of wonder, an ethic of care, and aesthetic and cultural production around these. This article proposes enchantment as a concept to evoke these elements and discusses the merits and dangers of imagining an enchanted Anthropocene. It looks at emergent alternative framings for thinking about a human-shaped earth and examples of related practices—rewilding, biophilic cities, planetary gardening, smart landscapes—which could make for a more habitable and welcoming epoch. *Key Words:* *Anthropocene, enchantment, rewilding, sociotechnical systems, urban nature.*

人类世——这个人类活动在地球的地质纪录上产生信号的地质纪元——经常呈现作为无情地听天由命的时代。此一世纪由焦虑所驱动的叙事，可以转译成监控、强化边界、农地获取等相当物质化的地景，而在此般地景之中，猜疑行塑了生活的现实。本文主张，与其加入悲观的预测行列，或是全然反对具有瑕疵的概念，地理学者位于相当好的位置，对于接合一个不同的人类世进行试验。美好的人类世片断正在着手设计中：农业生态学、绿屋顶与绿建筑、分布式可再生能源系统。但编织一个足以令人信服的愿景以引发文化及政治变革，则同时需要其他元素：重新甦醒的惊奇感受、照护伦理，以及与之相关的美学和文化生产。本文提出魅化做为唤起这些元素的概念，并探讨想像一个魅化的人类世的益处及危险。本文检视想像由人类所形塑的地球的浮现中之另类框架，以及相关的实践案例——再野化、亲生物的城市、地球的园艺、智慧地景——这些实践能够创造出更宜居且更受欢迎的纪元。*关键词：*人类世，魅化，再野化，社会科技系统，城市自然。

El Antropoceno—la época geológica durante la cual las actividades humanas son señaladas como parte de los registros geológicos de la Tierra—aparece a menudo como una edad abordable con sombría resignación. Las narrativas gestadas dentro de la ansiedad acerca de esta era pueden traducirse en paisajes de vigilancia muy materializados, fronteras endurecidas, adquisiciones de tierras de labranza, y demás, en fin, paisajes donde la especulación configura las realidades vitales. Este artículo propone que en vez de unirmos al coro de predicciones tenebrosas, o de rechazar de plano el concepto plagado de defectos, los geógrafos nos hallamos en una buena posición para experimentar en la articulación de un Antropoceno diferente. Ya se hallan en proceso de diseño fragmentos de un hermoso Antropoceno: la agroecología, techos y edificaciones verdes, sistemas distribuidos de energía renovable. Pero para entretejer una visión lo suficientemente cautivadora, que provoque cambio cultural y político, son necesarios otros elementos: un renacer del sentido del asombro, una ética de la preocupación y, alrededor de estas cosas, una producción estética y cultural. Este artículo propone el encantamiento como un concepto que evoque estos elementos y discuta los méritos y peligros que sobrevendrían de imaginar un Antropoceno encantado. Se mira a esquemas alternativos emergentes para pensar en una tierra humanamente configurada y en ejemplos de prácticas relacionadas—e-naturismo, ciudades biofílicas, jardinería planetaria, paisajes inteligentes—que pueden hacer de esta una época más habitable y acogedora. *Palabras clave:* *Antropoceno, encantamiento, re-naturismo, sistemas sociotécnicos, naturaleza urbana.*

The Anthropocene, supposed as our new geological home, is more than a single metaphor or narrative. It is those: a “gloomy metaphoric insistence that people are like forces of geology”

(Robbins 2013, 316), or a denouement (Szerszynski 2012, 168), a climax in a tale of becoming. It is more useful, though, to see the Anthropocene as a collection of multiple, related stories, each calling up the

reference of another—*People who liked this also read*—the whole narrative assemblage adding up to something more than its pieces. Stories in this Anthropocene anthology are uncanny. Land grabs for palm plantations and chemically treated cornfields, stripped and hydrofracked landscapes, whitened skies from solar radiation management: All of these interreferential horror stories take on new gravity as part of the Anthropocene, or Misanthropocene (Patel 2013), package.

On the flip side of graphic stories are dull tales of detachment, statistics about human appropriation of primary ecological production; for example, where humans become a collectively bland actant. Yet scientific and graphic descriptions can bleed into one another: Witness maps with viscerally red hot spots or descriptions and new vocabulary like Chesworth (2010) employs: “Since the Neolithic, agriculture has become an increasingly powerful forcing factor on processes at the Earth’s surface. It attacks the vulnerable skin of the landscape and routinely increases physical and chemical change by one or two orders of magnitude over natural values” (35). Forcing factor, vulnerable skin; “agrobleme,” agricultural scar; “anthrobleme,” human scar (Chesworth 2010, 35): A graphic and scientific mire emerges. These horror stories are simultaneously *disenchantment* stories, in the Weberian sense. The Anthropocene is told as a sublime yet simultaneously rationalized era.

Critical scholars have identified many limitations of this imagined new era, in both its concept and its telling (Moore 2013; Malm and Hornborg 2014). It is gloomy, it is environmentally deterministic, it flattens, it obscures, and it collapses humans into one species. Chakrabarty (2009, 216) asks:

Why should one include the poor of the world—whose carbon footprint is small anyway—by use of such all-inclusive terms as *species* or *mankind* when the blame for the current crisis should be squarely laid at the door of the rich nations in the first place and of the richer classes in the poorer ones?

These criticisms and probings are important and well deserved. This article, however, posits that coopting or retelling the Anthropocene might be more useful than arguing against or dismissing it. Already gaining popular resonance and reception, the term’s flight beyond geochemistry journals indicates that it provides some function for people. Only after considering what work this word *Anthropocene* could do toward futures we might want should the notion be rejected. The signifier provides a linguistic jolt and

further loosens the human–nature binary. It switches the thinker’s temporal sense into the geological, offering, as Yusoff (2013) puts it, “a shift in the human timescale from biological life-course to that of epoch and species-life” (784). Offering a name for this unfamiliar time is an important step in recognizing and confronting it. Furthermore, as suggested by Dalby (2013), focusing on the present as the latest geological period—the next phase—suggests a continuity with the past that does not represent “the end times” but, rather, a call to “shape the future in ways other than those suggested by the Pentagon’s planners” (191). Hence, here is a question to begin with: If the Anthropocene was not an anthology of scary tales, drawn from an awkward bricolage of science and preternatural fears, what else could it be?

Imaginative Forcings

Whose imaginations do Anthropocene stories originate from? First and most obviously, earth systems scientists give voice and visage to the concept. The humanity-as-earth-moving-agent also places “us” humans in a spectacular position. The current imagined storyline is perhaps the legacy of the Boomer generation, who grew up in an era of polarizing conflict and epic storylines—and who are thus enabled to continue carrying (for a few more years) what Latour (2013, 88) has called “Atlas’s malediction,” the “weight of the Globe, this strange Western obsession, the true ‘White Man’s burden.’”

Whose Anthropocene is it not? Who benefits from and is disadvantaged by this version of the Anthropocene? Moore (2013) has suggested that this is the Anthropocene of capital, the Capitalocene. Szerszynski (2012) suggests that “*Homo consumens*, that other-than-human assemblage of humans, technology, fossil fuels and capitalist relations,” could be a contestant for “the onomatophore of the Anthropocene” (175). On one hand, it seems true that we are living in the imagination of capital; we can look out the nearest window and see its traces and logic inscribed on just about any landscape. Capital stalks the whole earth, as Smith ([1994] 2008) describes it; “no part of the earth’s surface, the atmosphere, the oceans, the geological substratum or the biological superstratum are immune from transformation by capital” (79). On the other hand, we are also living in our imagination of its force, of capital as enchanted and enchanting sublime mover. Our imaginations are necessary to truly

animate this force, and we trade away some power in the process. Hence, Bennett (2001) aims “to deny capitalism quite the degree of efficacy and totalizing power that its critics and defenders sometimes attribute to it,” asking “Why should one bother to criticize what is inevitable or challenge what is omnipotent?” (115).

As for who benefits from this version of the Anthropocene, the sense of inevitability of geological machinations, as well as the constraints posited in an era of resource scarcity, help land and commodity speculators drum up investment. Stories of inevitability and constraint also aid extraction companies, whose high-capital projects need to construct a somewhat-certain near-term future of high prices to be worth pursuing. The infrastructure involved in these projects is weighty; it hangs around and inflicts some degree of lock-in. So do military technologies, and dark Hobbesian versions of the Anthropocene invite securitization. The “global farms race,” for example, alludes to a new kind of securitization and competition but with referent to a Cold War mentality. With regard to either securitization or technological lock-in, accepting humans as rapacious earth eaters leaves scholars adrift in strange discourse coalitions with actors who have a dismal and dangerous politics. The point here is that Anthropocene storylines have fiscal, ecological, psychological, and other practical effects. These imagined futures shape present and future human and nonhuman ecologies, and geographers are well poised to examine them.

The Uses and Abuses of Enchantment

There are motions toward retelling the Anthropocene. The moment or movement variously known as green modernism, postenvironmentalism, or eco-pragmatism (Brand 2009) posits that humans have been changing ecosystems for millennia, ecosystems are not static entities, and humanity’s reshaping of the environment must be accepted. Steffen, Crutzen, and McNeill (2007, 618) posited a reflexive “third stage” to the Anthropocene, beginning now, when humanity might or might not rise to meet the challenge of being a self-conscious, active agent in its own life support system. Some of the green modernist approaches risk being bound up with the rational trade-offs and disenchantment that comes from quantifying the nature that we want to preserve. For example, Marris’s (2011) vision of a “global, half-wild rambunctious garden” begins to shift toward enchantment, invoking energy with a well-chosen adjective, but her articulation gets

caught up to some degree in calculating costs. Rather than critique the retelling of others, however, this project is exploratory: How could a better retelling happen?

The suggestion here is that one component of a compelling retelling is enchantment. *Enchantment* is understood here as something akin to Bennett’s (2001) notion of a state of wonder, a mood centered around sensuous experience: “To be enchanted is to be struck and shaken by the extraordinary that lives amid the familiar and the everyday” (4). For, as Bennett asks, “What’s to love about an alienated existence on a dead planet?” (4). Yet that is what the Anthropocene anthology offers, intimating that by “dominating” the planet, humans have effectively disenchanting it and are also alienated from it: Anthropocene as final blow to an enchanted prior state. There are many thought traps bound up in this idea. “How could we be capable of disenchanting the world, when every day our laboratories and our factories populate the world with hundreds of hybrids stranger than those of the day before?” asks Latour (1993, 115). Bennett (2001) asks, “Why must nature be the exclusive source of enchantment? Can’t—don’t—numerous human artifacts also fascinate and inspire?” (91).

The process of enchantment is understood here to have two parts: language and practice (or ritual, or performance). Enchantment is drawn from the roots of “enchant” and “charming,” *incantare*, to sing, reflecting its linguistic or discursive process. As mentioned, speculative futures are created through word and image, whether this is in advertisements, risk prospectuses, or anti-immigration speeches. This first part, the linguistic, has some obvious dangers. Enchantment in the post-modern context speaks of simulation, of illusions, of cathedrals of capital, of the risks of losing reason or discernment. This provokes this question: Who are the enchanters? Capitalists are not the sole enchanters in the Anthropocene: Anyone can enchant an object, a habitat, a landscape, although people are not generally taught processes by which to do this, and there are not necessarily equal opportunities for these enchantments to blossom into widespread material changes. To be clear, I’m not suggesting going in an illusory direction with this idea. Nor am I advocating a new enchantment or romance with nature-as-object. A better project than reenchanting nature is to enchant humans-in-nature, which is about relationships. Hence, what is needed are practices where relationships can emerge, nonmediated and intimate. In general, the Anthropocene appears to us in mediated forms; one can sense it remotely, track its development, watch its representations evolve in print

and on the Internet—but one is not immediately in it, working with it, part of it. The body is a forced temporal migrant within the Anthropocene, but the mind remains outside it, observing. Hence, the invitation here is for Anthropocene as practice, not Anthropocene as a container or setting for experiences. We need to not just retell the Anthropocene but redo it.

Of course, a disenchanting Anthropocene is also constructed through practices, but these happen largely in various states of alienation. The Anthropocene anthology offers the ultimate alienation: You did this and you didn't even know. Both consumers and producers are distant from their actions—and in popular representation, the more alienated a phenomenon is, the more Anthropocene it gets. Gathering firewood seems quite Holocene in its immediate labor. When it comes to Arctic mining or tar sands oil, the product and the processes and practices of getting it are mediated by railroads and pipelines, by the water used in processing, by spot prices and financial instruments, by experts in refining, and so on; this is hypermediation. This level of extraction, of geologic shaping, requires extreme specialization of labor to execute. These are Anthropocene practices available to a select few—those who are trained for it and who are often most immune to the effects of the practice's final waste products. These practices offer their own enchantments—that of the winning financial trade, the new hydrocarbon discovery. The embodied practices I want to focus on here, however, are characterized by two different things. They are (1) immediate, as in nonmediated, and (2) intimate—they open relationships with nonhuman nature.

The proposition here is that relational practices enable enchantment, and this is part of socioecological transformation. The sense of wonder evoked in encounters can lead to an ethic of care and tenderness—or it can lead to revulsion and perhaps action. These are not mutually exclusive directions. As Gibson-Graham (2011) asks: “While we might feel love for other earth creatures and want to accept a responsibility to care for them, might we also extend our love to parasites, or inorganic matter, or to the unpredictability of technical innovation?” (7). Being in relationship, or having enchanted experiences of humans-in-nature, can encompass several affective logics: mourning, comedy, a sense of the uncanny.

Enchantment is no substitute for structural, institutional, and political changes on various scales. Enchantment can be transient, and opportunities for engaging in some of the enchanting practices I

mention later are subject to power dynamics. Rather, I think enchantment can enable the passion, care, revulsion, action, networks, sense of place, relationships, and so on that help bring about these socioecological transformations, offering greater momentum for mobilization than pure critique. It is transportive. Catastrophic narratives about the Anthropocene are less likely to motivate action on their own, and the science on climate change communication is applicable here. Evidence indicates that “fear framing” or risk-focused appeals to motivate public support of climate change policies do not work as well as positive, pro-environmental citizenship approaches or approaches emphasizing gains from taking action (Spence and Pidgeon 2010; Bain et al. 2012). As Moser and Dilling (2011) noted, “An excessive focus on negative impacts (i.e., a severe ‘diagnosis’) without effective emphasis on solutions (a feasible ‘treatment’) typically results in turning audiences off rather than engaging them more actively” (165). Publics suffering from apocalypse fatigue, or who believe that a grim future is inevitable, might have fewer incentives to do the hard work of socioecological transformation—whereas the immediacy of an enchanted, living, strange planet demands attention.

The second half of this article offers an invitation to stand within an alternative, charming Anthropocene and imagines its characteristics, tensions, and opportunities. In what follows, I offer four openings for how we might think differently about the Anthropocene. The aim is to continue to challenge some prevalent narratives of the Anthropocene by illustrating how things could be different, through referring to specific practices that offer relationship and enchantment.

Futuristically Ancient: Rewilding

First opening toward a charming Anthropocene: Humans have long shaped environments in a variety of ways, and understanding this helps imagine future practices in landscape creation and care. Evidence from paleoecology and environmental history continues to shake narratives of the “ecologically noble savage,” the fall from grace that happened with the Industrial Revolution, or the human as necessarily and inherently destructive geological force. Since the late Pleistocene, land use change from hunting, foraging, land clearing, and agriculture has been profound in some regions (Ellis et al. 2013). More than 20 percent

of temperate woodlands were “significantly used by 1000 BC and most other biomes by AD 1000,” as predicted by a land use model (Ellis et al. 2013, 7980). Anderson’s (2005) *Tending the Wild* illustrates how complex management practices on the part of native peoples shaped productive landscapes in what is now California: “Categorizing indigenous peoples as either hunter-gatherer or agriculturalist obscures the ancient roles of wildland managers and limits their use of nature to the two extremes of human intervention” (125). As Brand (2009) appraises Mann’s 1491, “Before the great dying [of Native Americans], the American continent was a managed landscape. . . . Afterward, it was an abandoned garden that the Europeans misinterpreted as wilderness” (239). If previous “wild” landscapes were in fact tended and managed, a future analog could be “rewilded” landscapes.

Rewilding is a framework and practice that holds some epic sway, as it alludes to both past and future: In an enchanted Anthropocene, humans are not reduced to simply removing species but reintroducing them. Proposed by conservation biologists Soulé and Noss (1998), rewilding started with species reintroduction but grew to mean rewilding whole ecosystems. The active “cores, corridors, and carnivores” approach was juxtaposed with biodiversity conservation, which focused on protecting diversity and particular species. Using both scientific and aesthetic justifications, Soulé and Noss argued that “by insuring the viability of large predators, we restore the subjective, emotional essence of ‘the wild’ or wilderness” (7). In 2005, a group of scientists sketched out an ambitious Pleistocene rewilding plan, which promoted the restoration of large wild vertebrates into North America—horses, Bactrian camels, lions, cheetahs, elephants, giant tortoises—in preference to an impeding landscape “dominated by rats and dandelions” (Donlan et al. 2005, 913). This would change the “underlying premise of conservation biology from managing extinction to actively restoring natural processes” (913). The authors argued that large vertebrate restoration is an ethical responsibility, as humans were at least partially responsible for their extinction. There are also ethical challenges, though, including the ethics of introducing predators, the ethics of introducing animals that might starve to death in the wild, and the critical question of whose land gets rewilded.

Assuming that rewilders could grow to navigate these concerns, the appeal of charming megafauna is obvious. Yet rewilding can be an enchanting practice beyond charming megafauna. Lorimer and Driessen

(2013) studied Pleistocene rewilding in Oostvaardersplassen, a Dutch polder reclaimed in the 1950s from the sea. They suggested that the rewilded Heck cattle act as monsters that create “an unruly potential and an affective force” and that the project creates a time and space to engage experimentally with hybrid life forms (257). Monbiot’s (2013) book *Feral: Searching for Enchantment on the Frontiers of Rewilding* describes how anarcho-primitivists have applied the concept to human life, imagining a rewilding of people and their cultures. He, too, suggests that rewilding is a reinvolverment with nonhumans and that “the rewilding of both land and sea could produce ecosystems, even in such depleted regions as Britain and northern Europe, as profuse and captivating as those that people now travel halfway around the world to see” (Monbiot 2013, 9). Refreshingly candid about his position as a northern citizen who faces “ecological boredom,” Monbiot (2013) writes that “our sublimated lives oblige us to invent challenges to replace the horrors of which we have been deprived” (6). Yet although there is a kind of middle-class comfort zone for these longings, dreams, and alliances, this does not mean that they must only dwell there. For one, rewilding visions enable strategic political performance. They can be “suited to the creation of opportunities for alliance with historically colonized places and people to produce what might best be described as *experimental conservation theatre*” (Robbins and Moore 2013, 13). This is not the only mode rewilding can operate in, however, as Lorimer and Driessen’s (2013) reporting indicates. Rewilding might have the potential to be participatory practice and “social movement on a grand scale” (Fraser 2009, 250). In other words, rewilding efforts could become tactical performance, a genuine bottom-up social movement, or both.

Art and Craft: Building Biophilic Cities

This is the second proposition of a charming Anthropocene: Art and craft are innately human ways of shaping worlds, and a charming Anthropocene would incorporate these approaches into earth-shaping processes. Many of the words we use to describe human relations with the rest of nature—alteration, intervention, manipulation, artifice—have roots that are less sinister than their connotations: *manipulate*, by hand, human the tool-maker and craftsperson; *artifice* like art and design, *techne*. Loosening the connotations helps

us imagine another version of what humans actually do with and in nature. Art and craft can allow for an enchanted, immersive state, and there is a relationship here with design as well, although contemporary design is often professionalized and performed for a client. There is also a relationship with aesthetics, which, as Yusoff (2010, 77) argues, is part of the practice of politics, as well as a space that configures the realm of possibility in politics.

The city is an illustrative site through which we can look at art, craft, and political aesthetics more concretely. The modernist urban planning of the twentieth century disenchanting cities; as Scott (2012) wrote, it “bears more than a family resemblance to scientific forestry and plantation agriculture,” with its emphasis on visual order and the segregation of function (41). The contemporary moment, in terms of both culture and technology, however, makes a new conception of the city as integrated habitat possible. The various permutations of phrases involving urban-biodiversity-eco-design-politics point to this. “For the first time in history, an entire city can choose to become the functional urban equivalent of a natural ecosystem,” enthused Despommier (2010, 2), who envisions vertical farms with hydroponics, aeroponics, drip irrigation, and advanced LED lighting as keystones of such ecosystems. Another approach is the biophilic city, which emerges from the idea that humans have an innate affiliation with and evolutionary need for contact with nature (Beatley 2011). Aesthetic and cultural elements include green roofing, community forests and orchards, edible landscaping, living courtyards, green utility corridors, pocket parks, vertical gardens, bird-friendly buildings, and so on, which make visible the ecosystems within, and blend art and craft on the part of citizens to form relationships. This is not a city–nature hybrid that mosaics together city and not-city elements; nor is it the vision of green urbanism or environmentally sensitive design, with their emphasis on better transit and building efficiency. Rather, biophilic cities emulate and incorporate natural forms, but also imply an expanded ethic, activities, attitudes, knowledge, institutions, and governance (Beatley 2011)—in short, conviviality. Perhaps a vision for a livable Anthropocene will crystallize around movements focused on the right to enchanting cities and transforming them through politics, art, and craft not into expensively designed green enclaves but into places where encounters happen.

Connection and Care: Planetary Gardening

The third proposal for a charming Anthropocene is a sense of connection that leads to communication and care, placing us in an Anthropocene resembling Berry’s (2004, 39) “ecozoic,” where “the first principle of this new era is to recognize that the universe is a communion of subjects, not a collection of objects.” Connection, communication, and care have sometimes been considered gendered traits, and we can ask what a feminine Anthropocene would look like. Notably, ecofeminist discourses that essentialize connections between women’s caring and ecological politics are wrought with ecomaternalism (MacGregor 2006). Furthermore, suggesting that the Anthropocene might be an era brought about by men ignores women’s interactions with their environments. How women have shaped the earth over time is understudied. Scharff (2003) points out that although works like mega-dams and skyscrapers stand out, “bigness is no guarantee of ecological significance,” and “mistaking size for significance confuses documenting the ways humans have left a mark on nature with Worster’s far more ambitious goal of describing *interactions between people and all the other kinds of things on earth*” (10). A feminist retelling of the Anthropocene could begin with studying history to illuminate “how women’s actions, desires and choices have shaped the world, including the things men have done” (Scharff 2003, 10). Feminist ecological citizenship, as theorized by MacGregor (2006), suggests a way to not romanticize but politicize the capacity to care for the earth: Care is a “form of work and moral orientation that has been feminized and privatized in Western societies” (7) and must be distributed fairly within and between societies to realize gender equality and sustainability.

The garden is a site through which we can examine connection and care in practice. It is a powerfully enchanting trope: the linguistic enchantment of the garden of love, the walled garden, the secret garden, and so on. The Anthropocene provokes the question of scale: As mentioned, large-scale industrial monocropped landscapes are a referent for Anthropocene horror tales. Planetary gardening imagines something quite different. “The garden is planetary, few can doubt this any longer,” wrote Clément (2013), but then the question becomes, “How does one become the gardener of such a garden?” (266). Perhaps there is a shift from the garden as control to a site of relationship: Braun

(2008) noted that “gardening was earlier an object of scholarly interest for its inscription of ideology onto the landscape,” which “has taken on quite different meanings today, as a way to understand how people live in ‘passionate, intimate and material relationships with soil, and the grass, plants and trees that take root there’ (Hitchings, 2003)” (667). To take the garden beyond its walls, and to a planetary scale, agroforestry and advances in agroecological food production could produce edible landscapes. Popular books celebrate a grassroots movement of “agricultural creatives,” where land stewards, food distributors, and “foodshed design teams” reawaken wonder and taste, offering a refute to the supremely disenchanting site of fluorescent-lit supermarket aisles (Cobb 2011, 6). At the same time, these agricultural creatives enchant production. This is not entirely new, especially the romantic strain—witness Thoreau’s determination to “know beans” and cultivate a “long acquaintance” with the plants (cited in Marx 1964, 256). Yet a cultivation revolution would have important political and livelihood implications for actual farmers in many places. Agriculture is being reconceptualized as part of a movement to fight corporate interests and loss of control. It is also no longer seen as a strictly rural activity. This everywhere-garden goes beyond the pastoral ideal, loosening those binaries of rural–urban, civilization–wilderness, and simplicity–sophistication, thus offering a means of connection and care for many.

Convergences and Distributed Systems: Smart Landscapes

There is a fourth suggestion for a charming Anthropocene: Whereas disenchanting Anthropocene stories are tales of hierarchical planning and control (or utter chaos), a charming Anthropocene will build on the peer-to-peer, distributed, open-source, rhizomatic notes of our time. Despite the dominance of hierarchical systems in many arenas, increasing attention and enthusiasm is being routed toward peer-to-peer networks, the “sharing economy,” and “disruptive” models of distributing goods and services. Distributed food, energy, and information systems allow for more direct and intimate experiences. They can be worked on, tweaked, and customized. Connection could thus be not merely affective but built into the infrastructure of new systems. For example, an outdoor electric meter

lacks intimacy, but with rooftop solar panels or neighborhood wind turbines, there is a relationship to develop there: with the weather, with the form. A sunny or windy day has a new importance. Distributed systems can also imply a greater sensitivity, which Latour (2013) sees as “the real meaning of what it is to live in the Anthropocene”—this ability to feel consequences. Distribution can help with what Latour calls “explicitation”: “Everything that earlier was merely ‘given’ becomes ‘explicit.’ Air, water, land, all of those were present before in the background: now they are explicitated because we slowly come to realize that *they* might disappear—and *we* with them” (Latour 2007, 3). Hierarchical systems increase distance; distributed ones can increase sensitivity and attachment, perhaps opening opportunities for the care described earlier.

Does this desire to invent a name for this new geologic epoch belie an inability to invent a new cultural or economic epoch? “Information Age” seems weakly inadequate as a name for our time. Yet we would not know we were in the Anthropocene without environmental data collection. Environmental informatics will figure into rewilding, smart city creation, smart agriculture, smart grids, and other relational practices. The convergence of the Anthropocene and the Information Age can be seen as offering us new infrastructure projects, and in some ways it makes sense to think of retelling these epochs together, as part of the same endeavor. The basic ecological infrastructure of the planet is under strain and needs care, whether that means cultivation, leaving places alone, rewilding, or crafting and reworking urban ecologies. At the same time, we are building an information infrastructure that interacts with the material world in new ways: sensed cities, mobile devices for DNA barcoding, geotagging, and so on. Big data enthusiasts Mayer-Schonberger and Cukier (2013) declared that with regard to data, “we are in the midst of a great infrastructure project that in some ways rivals those of the past, from Roman aqueducts to the Enlightenment’s encyclopedia” (96). This is partly immaterial but not entirely so. The suggestion here is that environmental informatics properly structured can help create awareness of ecological function, and that awareness can aid in enchantment. Smart landscapes are vague and new, and some smart infrastructure is designed to function silently and invisibly, like automatic precision irrigation. But other aspects of it, like wildlife monitoring, or the camera in a local library that streams a hawk nesting in the nearby

parking lot live, can increase wonder by raising awareness of the creatures cohabitating nearby, making them familiar parts of the landscape to relate to and perhaps creating demand for urban design that is more wildlife friendly.

Conclusion

Unless we build participatory, experiential infrastructure that offers room for enchantment, a data-driven future of surveillance, disciplinary architecture, and algorithmic decision making seems grim. Power, again, is the crux of the problem: Enchantment is influenced by who is doing the enchanting, designing, making, and relationship building. A relationship built between a subject and the world, through a practice, is a different kind of enchantment than one provoked by external design. Who has the power to experience and proffer enchantments? Brand's (1998) famous line from the *Whole Earth Catalog* is often excerpted in green modernism debates as both mandate and example of hubris—"We are as gods and might as well get good at it"—but his continuation is less often quoted. Against "remotely done power and glory" by big business and government obscures, he states that "a realm of intimate, personal power is developing—power of the individual to conduct his own education, find his own inspiration, shape his own environment, and share his adventure with whoever is interested." Infrastructure, cities, wilderness corridors, or gardens that are remotely designed would merely offer new flavors of the same old experiences. The participatory element is key to the whole project. Rewilded, biophilically designed, gardened, or smart landscapes shaped by the people who live in them could offer stronger and more lasting enchantments. As Gibson-Graham (2011) pointed out, there is an ethical project "of actively *connecting* with the more than human, rather than simply *seeing* connection" (5).

Retelling and practicing the Anthropocene asks even more of us than to speak or to act. It asks us to imagine another sort of human, a different character than the rapacious antagonist of the horror stories, who has shaped environments in a variety of ways throughout history. Human traits like tending, altruism, creativity, art and craftsmanship, and cooperation need to reclaim their status as basic human nature, although the competing economic and geopolitical actors of the (mis)Anthropocene minimize them.

Imagining another human thus invites us to imagine another human involvement in nature, one that is not managerial or technocratic. The price, though, is giving up stories about calculability or control, as well as stories of despair and tragic guilt, which have a sublime fascination and enchantment of their own. As Baudrillard observes, the "tonality of disenchantment" is *itself* enchanted ([1981] 1994, 162). In some sense, we are trading one sense of enchantment for another, more ambitious sort, as a different human involvement in nature demands new roles, responsibilities, and practices. The stakes, however, are too high not to experiment. We know about sea level rise and ocean acidification and the changing nitrogen cycle, about planetary boundaries and potential tipping points. Enchanting practices are no stand-in for large-scale political change, but as companion to proactive critique, they can help create the critical mass of engagement and care to give humans and nonhumans a habitable Anthropocene.

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