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ARTICLES

Placing Plants in Territory

Sarah Besky and Jonathan Padwe

■ **ABSTRACT:** In this article, we use plants to think about territory, a concept that is at once a bulwark of social theory and an under-theorized category of social analysis. Scholarship on plants brings together three overlapping approaches to territory: biological and behaviorist theories; representational and cartographic perspectives; and more-than-human analysis. We argue that these three approaches are not mutually exclusive. Rather, different epistemologies of territory overlap and are imbricated within each other. We further argue that these three approaches to territory inform three distinct domains of territoriality: legibility and surveillance; ordering and classification; and exclusion and inclusion. Through examples of how plants operate in these three domains, we illustrate the analytical potential that a more-than-human approach to territory provides. We conclude, however, that attention to the particularities of plant ecologies can help move multispecies discussions more firmly into the realm of the political economic.

■ **KEYWORDS:** borders, colonialism, garden, identity, multispecies ethnography, plantation, the state

Territory is an elusive concept. It is material and ideological. It is a product of collectivity and an object of control. Territory is inextricably social. Territory has much in common with closely related concepts such as property, place, or landscape, yet it remains conceptually distinct. In some framings, territory refers to the extension of power over space. It involves processes of boundary making, surveillance, control, exclusion, and defense. In these framings, territory is a mode of sovereignty, and the power involved is often that of the state. Yet territory also refers to the more subtle forms and practices of non-state actors who seek to establish control over resources or space.

In this article, we think with plants about the nature of territory. Plants participate in more than human territorialities, we argue, and we suggest that social scientists look beyond anthropocentric discourses of law and statecraft to understand the territorial projects that are entangled in the sprouts, stalks, and roots of plants, in their distributions and migrations, in their communities as well as in our own. Doing so holds out the promise of reconfiguring the way



we think, not only about territory, but also about power and sociality beyond the human. Why is such a project important? In response to that question we point to Laura Ogden's (2011: 4) insight that without a more nuanced politics of nature, "we cannot hope to create (or imagine) sustainable futures."

There is, in fact, a long history in the social sciences of considering the role of plants in the making of territory. Examples range from Roy Rappaport's (1967: 19) discussion of Maring "sub-territorial practices" surrounding the planting of *rumbim* (*Cordyline fruticosa* (L.) A. Chev.) in Papua New Guinea, to James Scott's (2009) arguments about the state-signifying properties of inundated *padi* rice (*Oryza sativa* L.) in Southeast Asia, to Londa Schiebinger's (2004) analysis of the gendered role of plants in the extension of colonial rule. In such studies, plants are often portrayed as markers of humans' presence on the land and as contested symbols of human projects of rule, indexing power in its spatial and ecological forms. Yet from the smallest garden plot to the largest plantation, from the rarest orchids in remote mountain forests to the most banal weeds poking through sidewalk cracks in the city, we can see plants as playing a role in the production of new forms of territory. The territorial projects of plants enliven landscapes, unsettling anthropocentric epistemologies.

Where do plants fit within discussions about the nature of territory? This question is important because it has become less and less possible to think about social relations and agency as purely human domains. As we are increasingly pressed to recognize the blurriness of the line dividing human from nonhuman actors, we are called upon to interrogate the analytical frameworks that have long served to buttress social science. Territory is one such framework, and we provide a brief review of it in the following section. Among the numerous approaches to territory we discuss, we focus on three in particular: (1) a *biological and behaviorist* view that emphasizes the "territorial imperative" common to all living organisms in competition for scarce resources; (2) a *representational and constructivist* (and sometimes cartographic) view that sees territory as a process of the inscription of power on often undifferentiated space, manifested, for example, in the Westphalian ideal of territory as the spatial extent of sovereignty, and enacted through maps, laws, and geographical discourses; and (3) a view of *territory as an act or a set of practices*. What distinguishes this third view from the other two is that through this lens, struggles over territory take place upon a more-than-human material terrain that itself shapes, or indeed participates in, the territorial encounter. From this perspective, territory is evental—a refrain of actions involving multiple actors, not all of them people.

As the table below indicates (table 1), we find correspondences between ways of thinking about territory and ways of assessing the territorial positionings of plants in the social sciences. As we demonstrate in this review, plants, too, have been interpreted within behavioral, constructivist, and more-than-human frameworks. Behavioral notions of territory inform the ways that geographers, ecological anthropologists, and allied scholars describe plants as competing for resources, as, for instance, when plants arrange their leaves and roots strategically, in competition for sunlight and soil nutrients. In a behaviorist view, these actions are governed by twin logics of scarcity and exclusivity. Constructivist approaches to plant territorialities seek to understand the ways that plants symbolically index human territorial projects. The discourse of "invasion ecology," for example, expresses nativism and xenophobia in a vegeto-biological dialect (Elton 2000). In our third category, we locate critical engagements with the materialities of plants, open to the fruitful possibilities that emerge when plants are considered potential actors—beyond crude biological needs—within territorial processes. More-than-human approaches to plant territorialities problematize modes of explanation that give precedence to human agency without accounting for the situated nature of anthropocentric epistemologies. Such approaches take issue with the ways that social science "tends to see only the social activ-

Table 1: Frameworks for understanding plants and territory.

	Biological Drive	Social Construction + Representation	Entangled or Distributive Agency + More-Than-Human Sociality
TERRITORY	Ethology; Behaviorism; Aggression; Territorial imperatives; Territoriality	Westphalian sovereignty and the Weberian state; Cartographic states; Territory as a container of power; Territory as a mode of power	Territory as a technology; Territory as an act, practice, or event; Territory as a network; Materialities of terrain and territory
PLANTS	Competition for sunlight, space and soil nutrients; Disturbance and ecological succession; Species distributions	Plants symbolize social and cultural boundaries; Plants represent human territorial projects (conservation, invasive species discourse)	Posthumanism, non-anthropocentrism, and the Anthropocene; Plant materialities production of territory; More-than-human territory; Plant agencies in territorial encounters

ity of *humans*” (Bennett 2010: 455). Following Latour’s insight that “objects, too, have agency” (2005: 63–86), authors exploring posthuman paradigms argue that notions such as “distributive agency” (Bennett 2010) or “entangled agency” (Barad 2007) aid in our understanding of social processes. Building on this theoretical work, anthropologists are starting to take seriously, for example, the notion that plants *feel* (Myers 2015) or that forests *think* (Kohn 2013).

Multispecies and more-than-human inquiries are useful because they upset received notions of sociality. This has important implications for theories of territory. Eduardo Kohn, for instance, uses the case of Runa interpretations of jaguar peregrinations outside socially appropriate bounds to discuss the articulation of human/nonhuman territorial divides (2013: 125–126). He introduces the idea of “trans-species pidgins” as a form of communication at the boundaries of human and nonhuman being, an argument that is not confined to animals. “[P]lants are also selves,” he explains, and “it is appropriate to consider nonhuman organisms as selves and biotic life as a sign process, albeit one that is often highly embodied and nonsymbolic” (75). Kohn’s Peircian reading of biological sign systems suggests openings for engagements between critical studies and such topics as plant sentience and phytosemiotics (e.g., Hustak and Myers 2012; Krampen 1981).

Elsewhere, anthropological work on more-than-human territoriality has helped rethink notions of ecosystem and landscape. Ogden (2011) shows how slow-moving human and non-human territorial actions—including those of mangroves (*Rhizophora mangle* L. and associated species)—have helped give Florida’s Everglades landscape its identifiable form. These actions defy representation. To investigate how plants mark territory is to inquire into their role as *material* boundary markers and as indexes of wider socio-natures (Castree and Braun 2001). Even in seemingly “natural” landscapes such as the Everglades or the Amazon, plants are agents of change. In these landscapes, human attempts at boundary making are always contingent upon the territorial refrains of plants, soils, animals, and waters (Raffles 2002).

While a growing emphasis on the material, more-than-human characteristics of plant worlds is useful, in this article we caution against the temptation to see the rise of more-than-human thinking as a harbinger of an entirely new politics. Instead, we suggest that attention to plants

can help us rethink a bundle of categories long familiar to political and ecological frameworks of territory. Below, following an overview of theoretical approaches to territory, we discuss work that engages a few of these categories: (a) legibility, control, and surveillance; (b) ordering and classification; and (c) tactics of exclusion and inclusion. In each of these domains, scholars continue to take biological, representational, and more-than-human approaches to plants and territory. We argue that these three approaches are not mutually exclusive. Rather, these different approaches coexist temporally: the Westphalian ideal has not been abandoned, even as some critics adopt deterritorialized notions of political power while others push for a posthuman “eco-politics” (Kohn 2016). Rather, different epistemologies of territory overlap and are imbricated within each other. Recent work with plants, we argue, draws attention to a complex entanglement of territorialities.¹

Toward a More-than-Human Territoriality

In a recent assessment of the role of anthropology in the time of the Anthropocene, Bruno Latour (2014) suggested that the concept of territory is at the heart of ongoing re-localizations of places in a world no longer organized around a utopian project of modernity. “Territory is back,” writes Latour, yet “what is to be reoccupied is not the post-Renaissance idea of a territory, that is, a bounded piece of land viewed and ruled from a center, but very much a new definition of an unbounded network of attachments and connections” (15). To move beyond this bounded, Westphalian notion of territory, Latour proposes an understanding of territory as “network,” which can serve as a critical tool for rethinking life on an ailing planet.

Geographer Stuart Elden (2004, 2010) similarly argues for the importance of retheorizing territory. As Elden points out, an understanding of territory as the spatial extent of sovereignty is axiomatic in Western political thought, enshrined, for instance, in Max Weber’s ([1919] 2004: 131) definition of the state as the “human community which within a defined territory successfully claims for itself the monopoly of legitimate physical force.” Yet it is precisely because the notion of territory is so seemingly self-evident within social theory that, ironically, territory has been “underexamined,” in Elden’s appraisal (2010: 799–800). In this section, we outline three overlapping frameworks for thinking about territory: behaviorist, representational, and more-than-human.

Behaviorist approaches to territory propose that control over territory represents a biological imperative for organisms, including humans, who are faced with the need to compete for scarce resources. Discussions of human aggression in psychological anthropology in the 1960s and 1970s emphasized this gloss of territory, transposing insights from ethology into the study of social life. This approach to the idea of territory was popularized in accounts such as Robert Ardrey’s (1966) *The Territorial Imperative: A Personal Inquiry into the Animal Origins of Property and Nations*. Assertions that territorial behavior represents an evolutionary drive have had a lasting influence in human behavioral ecology and sociobiology. The “economic defendability model” of human territoriality proposed by Rada Dyson-Hudson and Eric Alden Smith (1978), for instance, continues to influence debates over resource distribution within common property regimes (see Acheson 2015). The notion that territorial behavior represents a biological drive is not limited only to animal worlds but is also evident in discussions of plants competing for nutrients, water, sunlight, and space (Hall 2011: 152–153). As Elden (2010: 802) notes, behaviorist approaches to territory fail to adequately account for politics, history, or political economy. We agree. We also note that some of the most provocative new inquiries into the nature of territory have sought to demonstrate that the historical and political production of territory

must take seriously the ways that human and nonhuman territorial projects come to be entangled, a point we examine in greater detail below.

To understand territory as a representational project, it is helpful to think about maps and the ways they direct our attention to power and knowledge laid out on a linear plane with lines and legends to orient our view. In “On Exactitude in Science,” Jorge Luis Borges ([1946] 1999) parodies imperial knowledge and describes the construction of ever-more-detailed maps to represent the spatial domains of power. When the map of empire expands to the point where it overtakes the empire itself, the map becomes the territory it once represented. As tools of representation, maps, like the paper infrastructures of bureaucracy and even ethnological records, materialize control (Branch 2014; Pratt 1992). In his interpretation of Borges, Jean Baudrillard (1994) describes a time in which we are confronted with uncountable abstractions. He explains: “The territory no longer precedes the map, nor does it survive it. It is nevertheless the map that precedes the territory ... that engenders the territory” (1). The concept of territory invites analysis of representational practices—like mapping—that go into its making. The concept raises questions about the significance of points and lines on the map, but also of where territory falls apart—materially at fenced or frayed borders or affectively at contested senses of “homeland” or “belonging” (O’Gorman 2014; Plumwood 2008).

With the intensification of globalized connection, the destabilization of national orders of things, and new emphases on multi-sited arrangements of power and belonging, social theorists have increasingly sought conceptualizations of territory attuned to contemporary realities. Thus, for example, Saskia Sassen (2006: 415) notes that “the politics of contemporary sovereignties are far more complex than notions of mutually exclusive territorialities can capture.” Sassen argues for new conceptions of territory rooted in what she calls “mixed spatio-temporal assemblages.” Elden (2010), who takes issue with the ahistorical dimensions of Sassen’s heuristic, contextualizes notions of territory within historical, legal, political, and economic dimensions, arriving finally at a definition of territory as a political technology. Andrea Brighenti (2010: 63) urges the abandonment of what he calls “biological and social reductionism,” calling instead for a recognition that territories “are not simply relational, but also and primarily processual, evental and directional entities.” Territory, in his view, should be understood not as a thing but rather as a mode, or act (see also Ingold 2000). Brighenti’s evental territory builds on the work of Gilles Deleuze and Felix Guattari (1987), who propose the twinned analytics of deterritorialization and reterritorialization as tools for understanding the making and unmaking of social arrangements within capitalism. When signs—human or nonhuman—are separated from the contexts of signification—when they are separated from their constitutive actions, as Deleuze and Guattari (1987) put it—they are “deterritorialized,” a process that is always and at the same time accompanied by a parallel process of reterritorialization. Their companion notion of assemblage, the coming together of heterogeneous elements or objects as a form of social relation, further serves to illustrate what many of these new renderings of the concept of territory have in common, for all their differences. Deleuze and Guattari’s emphasis on expanding the range of actors understood to participate in territorial projects resonates with Latour’s provocation that we understand territory as a network of attachments and connections beyond the human.

These calls for new epistemologies of territory are exciting precisely because they spur the imagination. At the same time, notions of territory that are hardened by maps and border fences remain politically salient. Jason De León’s (2015) work on the US-Mexico border provides an excellent example of how different epistemologies of territory exist concurrently, complicating our understanding of what a border is and how it is maintained. For De León, the border is a processual, more-than-human space. It is an expanse of desert, but it is mobilized politically in the federal “Prevention through Deterrence” policy, which turns the desert into a migrant

“killing field.” In many of the examples we provide below, we emphasize the ways that plants are enrolled in material as well as representational projects within the different domains of territorial practice.

Accounting simultaneously for the representational importance of plants in the making of territory and the materiality of plants and their territorial actions is a challenging task. The formalization of plant categories (even as broad as “domestic” and “wild”) is a representational act that has material consequences. Maps, guidebooks, and even experiments rendered in scientific journals naturalize these categories. As Bruce Janz explains: “maps, at least the ones common in the modern age, start with abstractions and fit ‘territory’ into a numerical or conceptual grid” (2001: 393). Territory is not a given thing in the world, despite the outsized role that border patrol agents and cartographers play in constructing it. The cases traced in this article highlight how territory is made through a series of actions—of sounds, markings, and bodily compartments—which are only partly of human origin (Delueze and Guattari 1987; Kirksey and Helreich 2010; Kosek 2010; Ogden 2011). But these actions must be considered within the context of wider political economic factors. Certainly, we should ask: how does a forest think? (Kohn 2013). But also: how does a land speculator think? Or: what is the exchange value of timber? As Brighenti (2010: 63) explains, “a territory is something one makes vis-à-vis others.” Those “others,” we argue, operate at multiple scales of power and influence.

Legibility, Control, and Surveillance

While studies of the territorial dimensions of statecraft have often focused on international borders and political identity, Peter Vandergeest and Nancy Peluso (1995: 386) develop the notion of “internal territorialization” to demonstrate how control over resources, especially over forest land, was central to governance in Thailand. As the country made the transition from practices of rule based on control over people to practices based on control over land, they argue, the Thai state’s implementation of administrative boundaries served not only as a means to establish a system of modern government, but also as a resource control strategy.

The insight that projects of state territorialization are simultaneously resource control strategies helps us to see how plants—their arrangement upon the landscape, the uses to which they are put, their incorporation into markets, their meanings—become enrolled in territorial projects along contested agricultural and resource frontiers. Here the production of legible landscapes represents a territorial strategy, one closely related to projects of surveillance and control. Scott (1998) uses the concept of legibility to describe state governance projects that seek to render complex local dynamics, especially those concerning labor and land use, intelligible to a central authority and thus amenable to state control. State efforts to make landscapes legible make use of two broad strategies that touch on plant worlds. The first is the practice of scientific forestry, which sought to transform “real, diverse, and chaotic” natural forests into more uniform arrangements of commercial trees that fitted into the state’s administrative grid (1998: 11–22). The second is “high modernist” agriculture, an “agriculture of legibility” that likewise seeks to replace complexity and ecological variation with monocropped, pesticide-intensive commercial farming, a form of farming most amenable to state and corporate interests (262–268).

Seen in this way, the territorial extent of state power is mapped onto zones of agricultural simplification and intensification. This logic, taken to the extreme, finds expression in the form of the plantation—the cultivation of commercial crops in monocultures—often on land conceded by the state to private interests. In his study of marginal peoples and global markets in Borneo,

Michael Dove (2011) describes the historical processes through which Indonesia's state-backed plantation sector sought to extend its power by supplanting smallholder rubber production with more "legible" forms. The drive for legibility in commodity production necessitated the demarcation and defense "of a unique zone of state space: the plantation, estate, or concession," a process that was made possible only through the erasure of "pre-existing environments" and their replacement with wholly new social and ecological arrangements (2011: 23–24; see also Mintz 1960; Tsing 2015). In Kalimantan, this restructuring included the planting of imported Pará rubber (*Hevea brasiliensis* Müll. Arg.) in place of an array of native latexes (Dove 2011: 73–96). Pointing to the territorial dimensions of such projects, which seek to affect the material and epistemological transformation of the landscape, Dove compares the spatial arrangement of Indonesian and Malaysian rubber plantations to that of Jeremy Bentham's Panopticon, the prison design that served Michel Foucault (1978) as a model of surveillance-based spatial control.

Yet efforts to impose legible social and environmental relations are best understood as projects of rule rather than as fully formed systems, especially where they meet with practices of resistance, subversion, or appropriation, or contend with alternative territorial imaginaries that are often rooted in identity, memory, and belonging (Li 1999; Peluso 1995). In his study of the ways that forest management became a domain of state-making in India, K. Sivaramakrishnan (1999: 149–184) found that projects of internal territorialization were often incomplete. Claims that state domination was accomplished through the imposition of "territorial forestry" did not account well for the kinds of contestations these projects inevitably faced. In practice, this dimension of state-making was often forced to reckon with, and ultimately coexist with, alternate forms of resource control.

And in the case of the state-centric legible agriculture described by Scott, alternative arrangements of plants, people, and power likewise represented a challenge to state territorial orderings. The distinction between the lowland "padi states" of Southeast Asia and the vast upland anti-territory that Scott calls "Zomia" provides an example. Scott (2009) extends his argument about the legibility-conferring properties of intensive agriculture to the mainland Southeast Asian example of early states that were made possible only by the production of rice in inundated padi fields, a set of practices that produced the taxable surpluses early states required, and kept populations in place and available for conscription and corvée labor obligations. In contrast, the swidden agriculture practiced in the upland periphery was characterized by dispersed fields, multiple crops, variable harvest times and, in general, a set of highly variegated and non-uniform production practices that made upland agriculture "fiscally sterile" to lowland powers (Scott 2009: 6). Not only were swidden practices illegible to the state, but the very material grown by swidden cultivation—roots and tubers in particular—were "appropriation-proof." Scott explains: "After they ripen, they can be safely left in the ground for up to two years and dug up piecemeal as needed. There is thus no granary to plunder. If the army or the taxman wants your potatoes, for example, they will have to dig them up one by one" (195).

Whereas Scott (1998, 2009) observed how swidden agriculture in upland Southeast Asia made certain populations difficult for the state to "see," and in many British colonial contexts, the very fact that local populations were swidden cultivators made it easier to justify taking their land. In Darjeeling, India, the fact that local residents were swidden cultivators, not settled agriculturalists, enabled the area to be classified as "wasteland" by British settlers (Besky 2014: 43–44; see also Sivaramakrishnan 1999). Jayeeta Sharma (2011: 30–31) describes how the British viewed the indigenous *jaat* (variety) of Assam tea (*Camellia sinensis* var. *assamica*) much as they did the region's native inhabitants: "wild" and "uncivilized." Colonial botanists deemed this association to be so problematic that they felt the need to temper the Assam *jaat*—and Assam

as an imperial territory—with the non-native, but more delicate and controllable Chinese *jaat* (*Camellia sinensis* L.) (Chatterjee 2001; Kar 2002; Sharma 2011). Indigenous wild-growing Assam tea could only be useful to the Empire if it were controlled: if it were “civilized” through scientific innovation.

Appropriation and subversion can also operate in the reverse direction. The case of the territorial expansion of the rubber estate sector in Borneo discussed earlier provides a key example (Dove 2011). The case of plantation rubber is similar to other contexts in which development interests have refused to acknowledge existing tenure regimes deemed illegible and thus unrecognizable to the state. In such cases it is often only these newly introduced crops that confer legible property rights, and rural people have rushed to plant those crops in order to stake out their territorial claims. In Kalimantan, Dove found that smallholders creatively appropriate Pará rubber for just such a use. The plant is “the ideal vehicle for establishing proprietary rights, not only to the tree planted but to the land on which it is planted” (2011: 90), and thus smallholders have planted Pará rubber on their own lands to establish property claims and stave off expropriation by rubber plantations. Fadziloh Cooke (2002: 204) describes similar dynamics along the oil palm (*Elaeis guineensis* Jacq.) frontier in Malaysia, where villagers were “vigorously planting their own oil palm, ahead of the plantation companies” in a race to establish legible boundaries to their landholdings. In the 1990s, swidden farmers in Cambodia’s northeast highlands used the same strategy. Since fallow forest was vulnerable to expropriation as seemingly unused land, farmers stopped following old swiddens and instead planted cashew (*Anacardium occidentale* L.), a tree crop that served to establish a claim on that land (Padwe 2011).

Rubber and oil palm undermined local peoples’ claims to the landscape. All three tree crops allowed for claims to be made, in processes that proceed representationally (through the signifying properties of the plants in question), as well as materially (through boundaries constituted by the physical presence of plants on the landscape). Oppositions between swidden and *padi*, or between plantation and smallholder production models, furthermore create landscapes that, at least when viewed at broad scales, appear to be bifurcated between competing territorial regimes.

The bifurcation of the landscape of Israel and Palestine into two competing treescapes provides an additional example of the simultaneously representational and material boundary-making properties of plants. The Palestinian olive tree (*Olea europaea* L.) and the Israeli pine tree (*Pinus halepensis* Miller and *Pinus brutia* Tenore) today serve as “planted flags,” demarcating control over territory in a contested landscape (Braverman 2009; see also Cohen 1993). The trees have become “the quintessential symbols of Palestinian and Israeli national discourses,” the pine tree symbolizing “the Zionist project of afforesting the ‘desolate’ land of Israel” while the olive tree is “emblematic of the Palestinian struggle against Israel’s occupation and for national independence” (Braverman 2009: 10). Not only do Israel and Palestine pursue their national and territorial interest through the planting of these “Jewish” and “Palestinian” trees, but the destruction of trees, through burning or uprooting, has become an important symbolic act within ongoing political conflict (Braverman 2009; see also Abufarah 2008; Meneley 2008).

Plants are used to establish boundaries in the service of claiming and contesting territory. Social scientists have long observed how plants are used as boundary markers to signal ownership or occupation (Barth 1956; Godelier 1978). Boundaries, as De León (2015) notes in his study of the Sonoran environment, also gain their power in large part through nonhuman action. The use of plants as boundary markers raises questions about relationships between the notion of property and that of territory. Nicholas Blomley provides insights into this question in his study of the role of hedges in processes of enclosure in late sixteenth and early seventeenth century England. Blomley shows how shifts in the representational practices of surveying and

cartography encouraged “a view of property as a bounded and territorialised thing, rather than a set of interlocking local obligations and relations” (2007: 2). The establishment of hedges—plant assemblages composed of blackthorn (*Prunus spinosa* L.), whitethorn (*Crataegus monogyna* Jacq.), and associated species—played a crucial role within this transition “from tenure to territory.” Acting as a sort of “organic barbed wire,” the hedge concretized new property relations. It was “a device through which new forms of spatial discipline were both materialised and enforced” (5). Here, too, territorial projects were never complete, and were met with various forms of resistance and subversion. As a threat to common property, the hedge was an affront to the moral and social order. For this reason, hedges suffered “breaking” by peasants, who used them as fuel and, in the process, contested the territorial order in both material and representational terms. Carl Griffin observes a similar dynamic one hundred years later in England, where acts of “tree maiming” directed against landlords’ planting of orchards served not only to register protest but also to physically impede landlords’ improvements of their estates and thus their efforts to more firmly territorialize their claims (2008: 101).

Ordering and Classification: A View from the Garden

As a contained site where human and plant species enact, submit to, and resist spatial ordering, the European-style garden might be read as the more intimate companion landscape to the plantation or the orchard. Born out of a combination of modern domesticity, colonial science, and a concern about the preservation of nature in an urbanizing world, the garden has long been couched as a site where human territorial projects take the form of neatly classified taxonomized plants (see Williams 1976). Lately, however, social scientists have reimaged the garden as a site of more-than-human territoriality, where plants take an active part in shaping and claiming space (see Archambault 2016; Neves 2009). As Foucault (1986) remarked with reference to Chinese and Persian botanical design, gardens are “heterotopias,” where elements drawn from normally incompatible places or locations are juxtaposed in a single place. Gardens constitute a space of interplay between open-ended exploration and tight curation (Ginn 2012; Hartigan 2015). Gardens are both ruled and always at risk of becoming unruly.

Gardens owe much of their modern form to colonial expansion (Brockway 1979). In advance of major economic enterprises, naturalists traveled across the world searching for plants. Samples ranging from the decorative to the medicinal circulated from far-away desert, mountain, and forest landscapes to European gardens (Fan 2004; Mueggler 2011; Raffles 2002; Schiebinger and Swan 2004). Bioprospecting—from colonial science to contemporary capital extraction—is an ongoing process of de/territorialization (Deleuze and Guattari 1987; Hayden 2003; Schiebinger 2004). Bioprospecting involves both the extraction of plant material and the creation of experimental spaces, particularly botanical gardens. Colonial botanical gardens, in particular, were conceived to produce information about plants that would be “useful to the mother country” (Brockway 1979: 3). Kew Gardens in London, the Royal Botanic Garden in Edinburgh, the Royal Botanic Garden in Calcutta, and the Singapore Botanic Gardens were key nodes in a British imperial network (Drayton 2000; Prest 1981). This network answered questions about how to improve plants through species selection and hybridization, how to implement new cultivation methods, how to cultivate plants cheaply, and how to process plants for the global market (Brockway 1979: 5).

Richard Grove (1995) casts the establishment of botanical gardens as an attempt at mercantile conservation, or “green imperialism.” Perhaps the most important plant to imperial expansion was the Andean cinchona tree (*Cinchona officinalis* L.), the bitter bark of which contains

quinine, a malaria cure and preventative (Brockway 1979: 103–140). Despite attempts by the Peruvian government to maintain a monopoly on cinchona production by outlawing the export of seeds, cinchona traveled from South America through colonial botanical networks to be mass-produced throughout the British Empire (Honigsbaum 2002; Rocco 2003). Quinine was supplied to soldiers and civil servants alike and famously made a palatable “tonic” to be enjoyed with British gin. During World War II, quinine was a material necessity for military interventions in the Pacific, and supplies became a strategic target for the Japanese military (Schiebinger 2004: 3).

Work on botanical imperialism raises important questions about the limits of territoriality. Schiebinger (2004) asks why only some plants were brought to Europe, and into the order of the imperial garden, and not others. She examines the peacock flower (*Caesalpinia pulcherrima* (L.) Sw.), the state flower of Barbados, which is regarded throughout the Caribbean as an abortifacient. This plant did not travel to Europe. Adapting Robert Proctor’s notion of “agnatology,” or cultural ignorance, she describes this selective exploitation as one that opens up issues of gender, race, bodies, and the proper subjects of scientific expertise (Proctor and Schiebinger 2008; see also Moore et al. 2003).

Schiebinger (2004) describes the similar erasure of local taxonomies under the Linnaean classification system—what she calls “linguistic imperialism.” The Linnaean system constructed a landscape of commensurability, but the expansion of botanical empire was not a straightforward process. As the botanical garden became integrated into colonial metropolitan infrastructure, debates arose about what a proper garden should look like and what sensory responses it should evoke (Axelby 2008). Botanical gardens became places not just to do experiments but to also have experiences—of leisure, education, and reflection (Taylor 1995). They thus served a doubly “disciplinary” purpose. They aided in the articulation and consolidation of botany and agronomy as scientific disciplines, even as they reinforced aesthetic order upon colonial subjects (Foucault 1978; Ghetner 2010).

This disciplining extended beyond public botanical gardens to domestic space. In British India, keeping a properly “English” garden was central to colonial domesticity (Roberts 1998). Eugenia Herbert (2011) argues that British gardening practice was also territorial: gardens and bungalows served to mark space as British (see also Blunt 1999). As botanical gardens became open to non-specialists, their educational and disciplinary uses became apparent, but planners soon began to recognize that gardens had the capacity to soothe visitors—to provide a kind of aesthetic therapy (Axelby 2008). Scholarship on contemporary botanical and domestic gardens has tended to focus much more on this latter aspect, recognizing that the dynamics of plant life exert an influence on bodies and psyches that cannot ever be fully curated or controlled. Katja Neves (2009) describes the Montreal Botanical Gardens as a site for the cultivation of an ecological aesthetic sensibility, rooted in Gregory Bateson’s (1979) notion that learning is a fundamentally interactional process based on a recognition of the “pattern which connects” humans to other species (see also Hartigan 2015).

Increasingly, scholars of gardens have come to recognize such connections as a form of more-than-human territoriality. For example, the cultivation of turf grass—seemingly an intentional project of human territoriality par excellence—has produced a species that sutures particular gender, class, and racial norms into the fabric of American domestic life (Jenkins 1994; Robbins 2007). The American lawn, a byproduct of post-World War II suburbanization, is a glaring example of how domestic engagements with plants materialize entrenched class, gendered, and racial orders. In Europe and North America, choices of vegetation, location of plots, and the different ways of knowing how to garden help map an urban and suburban political ecology whose foundations lie in the colonial project of discovery and the elaboration of mercantile capitalism.

In this way, human relations to flowers, vegetables, and turf grass echo Donna Haraway's (2008) insights about human relations with Australian cattle dogs, namely, that they reflect an "inheritance" of practices of colonial control over human and nonhuman "others." Cattle dogs played a key role in "ordering" the American West and the Australian Outback, just as lawns have become indexes of a patriarchal white suburban middle class order, underwritten by a racially and ethnically marginalized labor force (Robbins 2007; see also Tsing 2013).

Yet gardening does not simply reflect colonial or capitalist conventions of territorial sovereignty or intersectional subjugation. Human-plant entanglements, while never free from the weight of history, can afford new possibilities for imagining the future. For example, Catherine Alexander (2002) explores the relationship between the British suburban garden, the house, and wider publics. Most gardens have houses, but gardens are not occluded like their domestic interiors.

The garden ... is a liminal space between the inside and the greater outside, the wilderness ... Paradise is domesticated, but the domestication is only ever partial; cultural borders, just like the herbaceous, are leaky and cannot be contained without labor. Always there, the garden as a made thing slips and slides in and out of view... the essence of such gardens is that they are partially uncontained. (2002: 869)

Gardens blur the distinction between domestic and wild, private and public, individual and collective, rather than symbolically reinforcing these categories.

This categorical and territorial slippage is evident in recent movements for "food sovereignty" and food security in the Americas (Edelman et al. 2014; Patel 2009). Scholars of food security and food sovereignty examined urban gardening and community food movements in diverse locations (see Truitt 2012 in post-Katrina New Orleans; Freidberg 2001 and Schroeder 1999 in sub-Saharan Africa; Premat 2012 in Cuba; and Shillington 2008 in Nicaragua). To be sure, gardens in the Global South are not merely sites of food production. They produce more expansive urban ecologies. As Laura Shillington notes (2013), fruit trees in the households of Managua provide not only calories but also shade, medicine, and decoration. Knowledge about fruit trees is maintained and passed on by women householders. The fact that women cultivate trees for many reasons makes viewing the value of the home garden as only nutritional highly problematic. Hannah Wittman and colleagues define food sovereignty as the "right of ... people to control their own food systems, including their own markets, production modes, food cultures *and environments*" (2010: 2, emphasis added). Food sovereignty, in other words, is thoroughly territorial. When domestic gardens are understood as aesthetic, medicinal, nutritional, *and* ecological, it becomes possible to understand calls for rights to food as also calls for rights to the city and rights to belonging in place (Shillington 2013). Urban gardening often adopts an ethic of "taking back" space for the urban poor through the production of plants, including but not limited to edible ones (see Heynen et al. 2012; Pudup 2008). In this sense, plants and people together work against processes of de-landing and de-skilling under capitalism (we might include fungi here as well, see Tsing 2015). The garden as a relationship of humans and nonhumans thus embodies both potentials for control and resistance.

Tactics of Exclusion and Inclusion: The Case of Conservation

Biodiversity conservation projects provide a third domain within which to explore the ways that plants produce and become enrolled in territorial projects. Here we focus on tactics of exclusion and inclusion, and note the ways that conservation is made territorial both materially, for

instance in the demarcation and defense of conservation territories against external threats, and representationally, for example in brightly colored green, blue, red, and yellow maps depicting ecological systems as “biodiversity hotspots” and “critical ecosystems,” or as sights menaced by the predicted impacts of global climate change (Brosius 1999; Neumann 2004).

Conservation entails the simultaneous inclusion of spaces for protection and exclusion of actors who might threaten those spaces and ecologies. The concept of biodiversity “hotspots,” introduced by Norman Myers in 1990, guides international conservation practice, identifying areas in need of protection through a combined analytic of biodiversity richness and perceived threats to that diversity. Myers and colleagues (2000: 854) describe the criteria for defining a global hotspot: “The species dimension is based in the first instance on vascular plants ... as they are essential to virtually all forms of animal life and are fairly well known scientifically; [to be categorized as a hotspot] an area must contain at least 0.5% or 1,500 of the world’s 300,000 plant species as endemics.” The diversity and scarcity of plant life is a first-order qualification for defining a hotspot. Their second criterion is the degree of threat faced by these resources. Threat analysis includes assessment of the risks posed by environmental degradation, deforestation, climate change, and socio-economic processes including the marketization of forest products, the legal recognition of protection measures, and support from governments (West 2006: 27–51). In the process, threat analyses can themselves become boundary-making exercises, de-emphasizing those “external” political and economic forces that are less amenable to conservationists’ toolkits.

Conservation’s territorial imperative is thus linked to a broader securitization of the environment, expressed in both discursive and material ways (Kosek 2006; Moore 2005; Peluso and Watts 2001). As Robert Marzec (2014) notes, militarized visualizations of the environment, such as those deployed in the mapping of hotspots, serve to legitimate the interests of those with access to extra-local forms of expertise (see also Harwell 2000, Fairhead and Leach 1996). The importation of militaristic territorial frameworks into conservation is often quite direct. For instance, the Tsavo Trust, a Kenyan non-governmental organization, deploys an “ink spot” approach to conservation, working intensively in settlements receptive to its goals, and then broadening its influence (Tsavo Trust 2015). The term “ink spot” in this case makes specific reference to the French counterinsurgency doctrine known as *tache d’huile*, developed by Colonel Joseph-Simone Gallieni in Tonkin in the nineteenth century and refined and deployed by French forces in Algeria and Vietnam (see Grinter 1975).

Territorialized militarism is likewise evident in the language of “invasion ecology,” a sub-field of conservation biology that studies the effects of non-native species in new environments (Elton 2000). Discourses of invasion frame processes of ecological transformation in nativist terms, and they urge us to view changing ecosystems as proxy wars in which plants and animals wage territorial struggles metonymically, standing in for the ethnic and national groups whose names they often bear (e.g., Oriental bitterweet [*Celastrus orbiculatus*], Eurasian milfoil [*Myriophyllum spicatum*], and Japanese honeysuckle [*Lonicera japonica*] among others). A 2007 factsheet distributed by the US National Park Service provides one example. The announcement alerts park visitors and others that “legions of alien invaders are silently creeping into the United States and taking over our native plants, animals and landscapes at an alarming rate,” and warns that “invasive weeds are taking over public lands at a rate of 4,600 acres a day ... so, to say that a war is being waged against invasive alien plant and animal species in the U.S. is no exaggeration” (PCA 2007; see also Mastnak et al. 2014). Popular scientific discourse surrounding invasion ecology delivers powerful messages about the proper place of plants, rooting them to national and ethnic territories, reifying xenophobic ideologies and reinforcing received notions about territorialized forms of national and ethnic belonging (Larson 2005; Olwig 2003; Subramanian

2001). Invasive species discourses thus go far beyond questions of ecological niche or evolutionary fit (Robbins 2001; Jeffery 2014). In settler societies, particularly Australia and the United States, scholars have sought to problematize the concept of “invasion,” tied as it has become to anxieties about “alien” peoples and cultures (Lavau 2011; Martin and Trigger 2015; Raffles 2014; van Dooren 2011).

The dialectic of inclusion and exclusion, then, is a particular form of territoriality, tied in unsettling ways to notions of purity and “natural” ecological stability. As Val Plumwood (2008) notes, the defense of highly valued places such as US National Parks or European protected areas from ecological invasion masks the fact that the very purity of those places depends upon the extreme ecological degradation of “shadow places” in the Global South, where species have been violently thrown together in the name of capital and state expansion. Plumwood (2008: 140) advocates a view of place that does not hinge on a binary of exclusivity and inclusion, favoring instead narratives “that make our ecological relationships visible and accountable.” Plumwood’s critical notion of place equates to a view of territoriality as an ongoing practice of doing, becoming, and relating. Amid climate change, the relationship between the rootedness of “indigenous” plants and that of people is surely at stake, as Sarah Ives (2014a, 2014b) has shown in her work on the shifting territories of the cultivation of rooibos (*Aspalathus linearis* (N.L.Burm.) R.Dahlgr.) in South Africa. The rising commercial significance of rooibos articulates not only with global changes in atmospheric conditions but also with particular debates about land tenure and race. It is the implication of plants and people in these multi-scalar processes, crosscutting wild and cultivated, capitalist and environmentalist, to which a critical, more-than-human reading of inclusion and exclusion points scholarship on plants.

Conclusion

More-than-human scholarship highlights the varied ways in which humans and nonhumans “become together,” offering new ontologies of agency (Haraway 2008; Hetherington 2013; Kirksey and Helmreich 2010; Kohn 2013; Myers 2015; Ogden 2011; Tsing 2015). Drawing these discussions into the study of how plants make territory is potentially fruitful. As our review of the history of European botanical classification and gardening shows, for example, plants play an active role in making even the most seemingly ordered of spaces. A focus on “becoming together” emphasizes that territory is less a push-and-pull between differently empowered human and nonhuman “agents” than a profusion of meetings and intersections that can never be reduced to the behaviors of single species—some competitive, some cooperative, some short-lived, and some long-lasting.

By way of conclusion, we want to draw attention to one unique quality of plants. This quality, for lack of a better term, is “slowness” (see also Myers 2015). Attention to the slowness of plant life can offer insight on the overlap between ways of framing territory, from the behavioral to the representational to the more-than-human. Plants grow, move, penetrate, and even invade, but they do this at velocities that are normally hard to discern with a passing gaze or occasional glimpse. Drawing on Brighenti’s (2010) notion of territory as an act, we suggest that the “slow research” methods of anthropologists, geographers, and historians are uniquely suited to analyzing the collective actions of plants and people (Adams et al. 2014). The work we review above reveals how the deceptive stillness and commercializability of plants might help move multispecies discussions more firmly into the realm of the political economic. That plants can be both stubbornly rooted and “invasive” seems like an instructive lesson for the contemporary moment. In line with Latour’s assessment of critical theory in the Anthropocene, the literature

we review here speaks to the “life and death struggle to have the right to stand in one’s own time and place” (2014: 15). Charting the ways in which plants participate in this struggle open up a view of territory that goes beyond state sovereignty and beyond narrow and apolitical ideas of ecological fit.

While a more-than-human moment in the social sciences has come with a burst of enthusiasm and speculation about an environmental politics that rejects human exceptionalism, we want to end with a note of caution. Taken as a whole, the plant/territory literature provides us with something of an antidote to the temptation to trumpet the arrival of a new politics. The behavior of plants, the representational machinations of capital and states, as well as the relational ethics developed in human-plant relations, all inform territory. Boundaries, colonial and contemporary forms of ordering and classification, notions of sovereignty, and powers of exclusion are still shaped—perhaps too much—by human priorities. As participants in the making and unmaking of territory, plants are both victims and agents of “slow violence,” exacted over decades and even centuries on landscapes and their occupants (Nixon 2011). We submit that rolling back the worst of such violence will require an appreciation, if not a reconciliation, of behavioral, representational, and multispecies territoriality. To understand how the territory of humans and plants might be otherwise, we must first understand what territory has been and continues to be.

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■ NOTES

1. Elden (2010: 801–803) observes that the term “territoriality” has in recent years come to be associated either with (a) the behaviorist notion of an inherent territorial drive or with (b) Robert Sack’s

(1986) proposed universal strategy for enacting power through control over space. Elden suggests it would be useful to reclaim the term's meaning as a condition or status of territory. We take up his call, and use the term "territoriality" to refer to a framing or epistemology of territory, in much the same way that the term "temporality," for instance, refers to a socially organized temporal framework.

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