Hypatia (2020), **35**, 298–316
doi:10.1017/hyp.2020.7

CAMBRIDGE
UNIVERSITY PRESS

ARTICLE

Nature's Relations: Ontology, Vulnerability, Agency

Didier Zúñiga

Department of Political Science, University of Victoria, David Turpin Building A316, 3800 Finnerty Road, Victoria, BC V8P 5C2, Canada
Corresponding author. Email: dzuniga@uvic.ca

(Received 20 May 2019; revised 11 October 2019; accepted 23 October 2019)

Abstract

Political theory and philosophy need to widen their view of the space in which what matters politically takes place, and I suggest that integrating the conditions of sustainability of all affected—that is, all participants in nature's relations—is a necessary first step in this direction. New materialists and posthumanists have challenged how nature and politics have traditionally been construed. While acknowledging the significance of their contributions, I critically examine the ethical and political implications of their ontological project. I focus particularly on how the decentering of human agency that they advocate for raises a set of concerns that need to be addressed in developing an appropriate ecological ethics. I argue that the latter must be attuned to the vulnerability of living beings who participate in relationships that sustain life on earth. This brings me to conclude that qualitative distinctions between the worlds of *bios* and *techne* are necessary. This is because we need to think critically about ways of evaluating types of relationships so that we can assess them and establish which are worth nurturing and protecting and which are not.

Key words: Ecology; Ethics of Care; Vulnerability; Ontology; Agency; Nature

Much recent scholarship on new materialisms and posthumanism is dedicated to decentering critical analyses of agency, power, and causation away from a humancentric worldview to the more-than-human worlds of technoscientific and naturecultural entanglements of objects, organisms, ecosystems, and matter.[1] This essay addresses the ethical and political implications of such work in the light of a concern for the co-sustainability of all vulnerable life. Even though political theory needs to be self-reflective and critical about its gravitational pull toward human exceptionalism, I argue that this should not entail the absence of normative criteria for adjudicating matters of importance. The main claim I will defend here is that the ontological flattening in the strongest sense that comes with the new materialist and posthumanist project raises a series of concerns in relation to normative theorizing to which we must pay critical attention. First, it posits a monistic outlook that ends up imposing uniformity and unity on a reality that is manifestly heterogeneous and plural. I explore the implications of this for the study of social and natural reality, notably in relation to what Laura Ephraim has called the

© The Author(s) 2020. Published by Hypatia, Inc.

https://doi.org/10.1017/hyp.2020.7 Published online by Cambridge University Press

"two-sciences settlement." Second, it can prevent us from asking critical questions about power, and hence about inequality and vulnerability. I argue that this is so because of the atomized responses it may lead us to prescribe to ethical and political issues. And finally, it stretches the notion of agency to the point where it risks losing the normative grip that enables us to evaluate beings and their relations in light of the extent to which they sustain life on earth. Hence the need to offer a picture of why agency matters, and in particular why is it normatively salient from an ecological point of view.

In what follows, then, I draw out the significance of maintaining evaluative judgments concerning why we should or should not care about beings and things and the ways in which they relate to one another. I begin by examining the relationship between the natural and the social sciences, and more precisely how they came to be characterized as incommensurable and mutually unintelligible. This caused the ontological opposition between nature and politics that new materialists and posthumanists repudiate. Although I agree with the spirit and the political necessity of their critique, I argue that it rests on a mistaken view of the "natural sciences"—because it fails to situate it historically and contextually—and that it is too quick to dismiss the distinction between the study of nature and the study of social reality. I also problematize the assumption that scientific experts are nature's proxies and can therefore speak on its behalf for democratic purposes. Underlying this view is an uncritical acceptance of authority, which is characteristic of a broader tendency to dilute issues of power and inequality. Moreover, I problematize the new materialist and posthumanist uncritical acceptance of the hegemonic power of natural science. This contributes to the marginalization of other forms of knowledge and epistemic practices by the dominant voices of our masterful politics, and hence prevents us from asking relevant questions about the structural conditions that are at the basis of our destructive relations to nature. I then consider the work of Hasana Sharp and María Puig de la Bellacasa, which enables us to think with and against new materialisms and posthumanism, since they both challenge human exceptionalism while recognizing the practical necessity of drawing a line between significant and less significant matters. This brings me to conclude that although I agree that the ontological opposition between nature and politics is harmful—particularly when it results in an apolitical conception of nature and a denaturalized notion of the political—we nevertheless need to articulate scalar distinctions of worth between the worlds of *bios* and *techne*. This is because we need to think critically about ways of evaluating types of relationships so that we can assess them and establish which are worth fostering and cultivating and which need to be transformed or curbed in the interests of ecosocial coexistence. I ultimately argue that these distinctions of worth ought to be grounded on the extent to which they respond to the vulnerability of nature.

I. The "Two-Sciences Settlement" and the "Two-Worlds Ontology"

The work of science and technology scholars such as Donna Haraway and Bruno Latour has thrown into serious question the distinction between nature and culture, a distinction that was and still is taken for granted by many in the social sciences and the humanities (Haraway 1991; Latour 1993). What these scholars and those they have inspired take issue with are the ontological and epistemological underpinnings of what Laura Ephraim calls the "two-sciences settlement" (Ephraim 2018). The latter refers to an intellectual paradigm that is premised on a discrepancy between the realm of "politics" and that of "nature" that has taken hold of much political theory

https://doi.org/10.1017/hyp.2020.7 Published online by Cambridge University Press

and philosophy. This oppositional view of nature and politics presupposes a bounded notion of the "political," which implies that social spaces are the exclusive sites for democratic politics—or for politics *tout court*—and therefore relegates the "natural" spaces to an apolitical sphere, one that is also seen as irrelevant as a site for ethical or moral reflection. Moreover, from a methodological point of view, the practical consequence of the "two-sciences settlement" is a strict separation between the social and the natural sciences, which are conceived as operating according to distinct and incompatible conceptual and procedural schemes that are imposed by their different objects of study (Ephraim 2018, 11). In short, the divide can be captured by the opposition between two sets of methodological imperatives: on the one hand, those that seek to discover regularities in natural phenomena and to achieve predictability because they are purported to analyze empirical matter, and hence be verifiable; on the other hand, those that strive to understand forms of social life by considering intersubjective and common meanings, which are by definition not extractable as "brute data" (Taylor 1985d, 19).

Charles Taylor's work has been particularly prominent in the discussions that have contributed to the production and reproduction of the "two-sciences settlement."[2] His writings on interpretation have attempted to delineate the criteria of judgment for understanding and navigating reality in a way that has foregrounded radically different structures of meaning between these two types of sciences (see, for instance, Taylor 1985c; 1985d; 1985e). But before elaborating further on these competing visions, it is necessary to stress that Taylor's critique is directed specifically at what he calls "naturalism," which corresponds to the view that holds that "the nature of which [human animals are] a part is to be understood according to the canons which emerged in the seventeenth-century revolution in natural science" (Taylor 1985a). In other words, Taylor is not advocating for an ontological separation between nature and society, but rather is emphasizing the contextual, historical, and contingent character of the assumptions that underlie a particular orientation to the study of political life. Such an orientation involves reductive and mechanistic accounts of human agency, given that it requires that explanations of social phenomena be formal and decontextualized in order to yield invariant results that are supposed to make sense independently of the wider spaces within which these phenomena are embedded.

One of the features of "naturalism" that Taylor identified and criticized is its ontological atomism, namely, the propensity of natural science-inspired political theorists and philosophers to conceive of reality in terms of self-contained, disaggregated units of analysis. Even though behaviorism offers the classical example, Taylor showed how certain strands of political philosophy reflect atomistic outlooks as well, particularly what he calls "primacy-of-right" doctrines (Taylor 1985f). Taylor's main targets in his 1985 book are those theories that rest on the premise that human animals are metaphysically independent of society, and that in order to understand the functioning of a particular society—and therefore to make normative claims about it—one needs to start from the ostensible self-sufficiency and autonomy of the individuals who comprise it (Taylor 1985f, 189–91). This reverse Aristotelianism leads naturally to a crude understanding of society, one that conceives of the political community as an aggregation of individuals who happen to be there at the same time in the same place. Seen in this light, human animals are deprived of the meaningful bonds that would hold a society together in the first place. A further, perhaps more recent, example of atomism in social theory is the trend toward framing political struggles (whether in the media, academia, or even by the protesters themselves) in terms of "moments" (Markell 2014). As Patchen Markell points out, this inclination to think of politics as "fleeting or

https://doi.org/10.1017/hyp.2020.7 Published online by Cambridge University Press

momentary surges of horizontal power" is nowhere more evident than in the usage of the word "occupations" to designate political movements that are depicted as "a matter of the sudden and dramatic interruption of ordinary life" (Markell 2014, 130–32). In addition to being sociologically false, since it overlooks the complex organizational structure of the movements in question, this picture of politics also promotes an impoverished notion of agency, one that conceives of will, decision, and intent in punctual terms (116). This is so because it inclines us to think about political action as spontaneous and episodic—that is, as occurring in finite time, in a bounded region of space, and constrained by its own termination (see also Laden 2012, 24–31). This of course raises the question of the duration of political action, and hence of its sustainability.

But let's return to Taylor's critique of the influence of modern conceptions of science on the study of the social world. The fact that his assessment is aimed at a specific intellectual development that had enormous influence across disciplinary boundaries at a particular time is crucial: given that it is possible to situate it within a specific framework of discourse and ideas, it is also possible to undermine it. For just as it is a mistake to apply the standards that emanate from seventeenth-century developments in natural science to try to understand social phenomena, so it is a mistake to reduce all intellectual endeavors that claim to study "nature" to such versions of scientific enquiry that have proven to be terribly implausible. We can therefore argue that, from Taylor's perspective, at least part of the chasm results from a misunderstanding of the philosophical problem we are dealing with. This is due to the hasty assumption that to rebut a scientific outlook for its failure to capture the interpretive and self-interpretive character of social life entails what Ephraim calls a "two-worlds ontology" (Ephraim 2018, 11). This is to say that Taylor's appeal for an approach to meaning that is free of "naturalist" commitments does not require the disconnection between the natural and the political that Ephraim associates with interpretive theories. On the contrary, Taylor's aim here is to caution us against the seventeenth-century scientific outlook that "shows us as capable of achieving a kind of disengagement from our world by objectifying it" (Taylor 1985a, 4). This objectification of material reality has destructive consequences for both human and nonhuman worlds, irrespective of a purported ontological division between the two.

It is then clear that the struggle against atomism and objectification is not inconsistent with the blurring of the dividing line between the natural and the human sciences. In this regard, James Tully's work is exemplary as it draws from Western natural and human sciences, as well as from the traditional ecological knowledges of Indigenous peoples (Tully 2016; 2018; 2020a; 2020b). Concerning the former, Tully is wary of the pitfalls indicated by Taylor but also of their connection with European global imperialism, which is at the root of much of our destructive and unsustainable relationships to the earth (Tully 2018, 85). Hence, Tully complicates the "two-sciences, two-ontologies" picture since he shows that the separation between politics and nature is not just the product of an epistemic mistake, but rather is constitutive of the extractivist agenda of capitalist imperialism. Yet Tully argues that in order to bring about an integral project of reconciliation that aims at both reconciling ourselves "with each other in all our diversity" and "with the living earth in its diversity," a multi-tradition dialogue between forms and ways of knowing and being is needed (Tully 2018, 83–86; see also Tully 2016). Such a dialogue of reciprocal elucidation can provide the kind of common ground on which to stand together if we are to engage with one another in mutually sustainable ways. The reunion of and reconciliation between this plurality of forms of knowledge that were pitted against one another and framed hierarchically by Western traditions of thought is

https://doi.org/10.1017/hyp.2020.7 Published online by Cambridge University Press

thus a requirement for developing ways of thinking and acting that pose serious challenges to the binary divide between the natural and the social worlds.

As Tully's work suggests, attending to our alienated relationships to the living earth involves overcoming the "two-sciences settlement" and the "two-worlds ontology," but not in order to prescribe a "single world," as Ephraim does (Ephraim 2018, 17), but rather to negotiate the coming together of a plurality of heterogeneous yet interdependent worlds (see also Puig de la Bellacasa 2017; de la Cadena and Blaser 2018). Indeed, the blurring of the dividing line between those worlds—and of the various of ways of thinking about and being with those worlds—does not entail that we merge them into a single material and meaningful entity, nor that we come up with a master science to systematically study them in toto. This would be to reproduce the imperious attempts to impose uniformity and homogeneity that we set ourselves to fight against in the first place.

II. Ethical Inquiry in More-than-Human Worlds

Much of what I have been discussing hints at a specific direction, which, while largely overlooked by political theorists and philosophers, has been explored by new materialists, posthumanists, and by scholars of some variants of science and technology studies. Although there are differences among these approaches, their common aim is to challenge the presumed boundaries that define the realm of human nature. The latter has not only been construed against those human animals who are regarded as abnormal, but also in contrast to everything that is other-than-human and that is subject to the purported superiority of the normalized human being (Puig de la Bellacasa 2017, 12). Considering this line of work is indispensable for anyone interested in developing ways of disentangling human and nonhuman relations and displacing political thinking by opening it up to nonhuman worlds. Indeed, thinkers affiliated with these approaches have disrupted the anthropocentric and humanist discourses that are at the basis of the ontological splits between mind and body, ideality and materiality, nature and culture, and which are responsible for the rendering of nonhuman matter as passive and inert (Frost 2011).

This ever-growing body of literature takes issue with the fact that "classical" political theory and philosophy have been held captive by a restraining ontological picture, or, to put it more starkly, following Elizabeth Grosz, by a privileging of the epistemological over the ontological (Grosz 2017, 3). The latter has resulted in an impoverished understanding of "what things are, how they connect with each other, what relations exist between them," and, consequently, of the attendant ethical and political questions that are posed by the intertwinements between the multiple forms of existence that live and act together (3–4). The project of replacing such a picture can be traced back to the lifting of what Ephraim jokingly refers to as the "informal travel ban" that prevented political theorists from wetting their toes in natural-scientific waters (Ephraim 2018, 19).[3] But the mingling of political theory and natural science that new materialists advocate for does not go without saying, and as Ephraim's work demonstrates, it is crucial to complicate it. Indeed, Ephraim argues that new materialist approaches are asymmetrical, because, though strongly critical (and rightly so) of political theory's dominant voices, they tend to rely uncritically on hegemonic scientific discourses (20–24).[4] And this has consequences for our understanding of the ways in which natural science matters for politics, because if we follow this path, we risk failing to interrogate the processes by which scientific narratives have been set in place, the professed authority that they

https://doi.org/10.1017/hyp.2020.7 Published online by Cambridge University Press

came to possess, and the legitimacy of their own claims to such authority. In Ephraim's words: "Without greater sensitivity to the political origins and outcomes of the authority exercised by Bohr or Prigogine, we risk distorting their postclassical onto-stories into next-generation ontological dogmas, narrowing instead of widening the stories that can be told about how matter matters in politics" (20).

Conferring authority on natural-scientific experts is a political question that is depoliticized in certain frameworks of representation, such as in Bruno Latour's idea of an association of humans and nonhumans, where scientists are given the role of "spokespersons of the nonhumans" (Latour 2004, 64, cited in Ephraim 2018, 22). The problem with introducing this taken-for-granted conception of scientific authority into the realm of politics is threefold: first, underlying this view is a restricted understanding of democracy, one in which governance is under the jurisdiction of experts and professionals who speak for the collectivity.[5] Second, this view accepts existing inequalities as inevitable—and hence "naturalizes" them—since it stops short of asking how it is that some of us are better able to speak on behalf of beings and entities who ostensibly cannot speak for themselves (Ephraim 2018, 23). This raises the question of the conditions of possibility of the practices of deference and referral that serve to recognize and institute the political constitution of scientific authority. And third, the complicity of the institution of so-called "natural science" with extractivism and global imperialism more generally must be exposed and repudiated. The implication of science as a hegemonic form of knowledge in relations of power raises important questions about how to mitigate such disparities, and about how to open spaces for multiple forms of knowledge, such as the traditional ecological knowledges of Indigenous peoples (see, for example, Nelson and Shilling 2018; see also Leff 2014; de la Cadena and Blaser 2018).

The failure of some new materialists and posthumanists to attend to structural inequalities requires that their contribution to political theory be complemented by a robust consideration of vulnerability. This is why the most compelling approaches to the subject come from the sort of feminist thinking that is attentive to vulnerability. The latter has been at the forefront of exposing the normalizing and exclusionary ethos that underlies the thought and practice of the purported champions of freedom and democracy in the Western tradition. As Hasana Sharp puts it, the feminist tradition in political thought "entails attention to inequalities, power relations, and the different capacities and vulnerabilities proper to differently situated subjects" (Sharp 2016, 277). Feminism's attentiveness to the various ways in which vulnerability manifests itself makes it essential for thinking about the ethical and political implications of this broadening of our ontological scope as advocated by new materialists and posthumanists. Hence Sharp's suggestion to approach the latter through a feminist lens, which calls us to reflect critically on the possibilities of life on earth amid the destructive forces that have been brought about by an ethos of mastery and dominance (274). It also makes us sensitive to the differentiated patterns of vulnerability and thus complicates the unqualified reference to human activity as the source of the destructive reconfiguration of the earth's systems (274).

Sharp's invocation of posthumanism is part of her project of "renaturalization," whose purpose is to redefine human existence beyond the dualism between nature and culture (Sharp 2011).[6] She argues that her position is posthumanist "if by humanism we understand a philosophical tradition that aspires to a universal union of humanity on the basis of a shared characteristic that is not exhibited by nonhumans, like reason, moral sensibility, or a capacity for autonomy" (Sharp 2011, 5). Her notion of "renaturalization" therefore strives to place politics in an ecological perspective, in

https://doi.org/10.1017/hyp.2020.7 Published online by Cambridge University Press

the sense that it integrates human agency into a web of interdependent beings and things and reorients ethical thinking toward our embeddedness in nonhuman nature. This entails challenging the prevalent ways in which we understand terms such as *environment* and, to a lesser extent, *surroundings*, namely, those terms that presuppose a conception of *nature* as that which gravitates around human animals. This is not to say that we should stop using those terms; rather, it means that we ought to question the status of the particular subjects whose surrounding reality is being studied. Indeed, it is because of our widespread belief in human exceptionalism that we have managed to think of ourselves as outside of nature. And, according to Sharp, "acting as though the laws of nature do not apply to us enables us to deplete the biosphere's resources, poisoning and annihilating many living beings and eventually undermining the habitability of the planet for humanity" (Sharp 2016, 277). For this reason, we need to revive a philosophical landscape that enables us to experience a sense of connection, involvement, and intimacy with other beings and things, and thus to widen the meaning of relational thinking in order to consider the interdependences among the multiplicity of members that form part of the biosphere. But this needs to be accompanied by a sensitivity to the agonistic interplay between powers and counterpowers in the constellations of agencies that coexist in and are constitutive of nature.

Sharp's posthumanism stresses the importance of power and vulnerability for understanding inequalities and injustices in a world that comprises both human and nonhuman nature. Following Spinoza, she suggests that if we want to "facilitate social harmony and political emancipation," then we ought to understand "humanity as vulnerable to the same determinations as beasts, rocks, and vegetables" (Sharp 2011, 7). Seeing ourselves as an integral part of nature enables us to rethink both how we relate to one another and how we relate to other-than-human beings and things. This is a lesson taught by the traditional ecological knowledges of Indigenous peoples, who insist that it is a fundamental mistake to dissociate political concerns from environmental ones (J. Borrows 2002; Turner 2005; Kimmerer 2013; J. Borrows 2018; Nelson and Shilling 2018, among others). This is because the very viability of political organization requires the well-being of the ecosystems on which living processes depend. In addition, these ecological conditions that sustain life disclose normative relationships of cooperation and mutual aid that are often not readily apparent to us, given the dominance of our unsustainable and destructive social systems (Tully 2019a; 2019b). Hence Sharp's attempt to both repudiate the masculinist anthropocentric imagination and to cultivate our receptivity to nonhuman forms of life by "expand[ing] the possibilities for new connections and relations," and hinting at potential directions for "maximiz[ing] the possibilities for tenderness, collaboration, and joy" (Sharp and Willett 2016, 82).

So far, I have been discussing approaches that point toward the importance of considering nonhuman nature in ethical reflection, as well as of problematizing taken-for-granted categorical structures that classify the world into matters of significance and insignificance. What we learn from these critical interventions is that decentering human agencies should not be taken merely as a metaphysical exercise, but rather as a necessary condition of ethical and political life. As Puig de la Bellacasa shows, engaging with more-than-human worlds raises a different set of questions from those posed by our encounters with other-than-human beings (Puig de la Bellacasa 2017, 2; see also de la Cadena 2010). Even though these two terms are often used interchangeably in the literature, there is a difference that is worth noting: the latter denotes otherized humans, nonhuman animals, organisms, and other living beings, whereas the former refers—in addition to those already mentioned—to physical forces, spiritual

https://doi.org/10.1017/hyp.2020.7 Published online by Cambridge University Press

entities, as well as things, objects, and other "posthumanist constituencies" (Puig de la Bellacasa 2017, 2).

From an ethical point of view, it is problematic to assign value unqualifiedly, particularly when that implies placing "things" and "objects" on an equal footing with mountains, rivers, forests, and other beings who co-sustain life on earth. Yet this is precisely what thinkers such as Sharp and Puig de la Bellacasa are criticizing: namely, the assumption that ethics must rely on a conception of agency that hinges on exceptionalism—the sort of exceptionalism that fuels the dominant and domineering imaginaries of our predatory social systems. According to Sharp's project of "renaturalization," for instance, "[n]ot only do cats and dogs join with humans in agential communities, but so do software systems, power grids, and sewage systems" (Sharp and Willett 2016, 72). This is why new materialists and posthumanists have clear affinities with science and technology studies, given their willingness to "observe and represent technoscientific agencies, things, and entities in ways that do not reobjectify them" (Puig de la Bellacasa 2017, 28). We can see this clearly in Barad's well-known observation that "[m]atter feels, converses, suffers, yearns and remembers" (Barad 2012, 59). By calling into question the dominant picture that presumes clear hierarchical orderings among different types of entities, this ontological flattening poses significant challenges to ethical inquiry as traditionally understood in political theory and philosophy. For this reason, Puig de la Bellacasa writes that her reflections are "speculative" instead of normative—that is, they are "open-ended," and they require "a speculative opening about what a possible involves" (Puig de la Bellacasa 2017, 6). What she means is that to classify something in such categories as "better" or "worse" is not something that we do in the light of a normative theory that "would serve us as a 'recipe' for our encounters" (90). In this sense, Puig de la Bellacasa does not seem to be so much opposed to establishing qualitative distinctions as she is concerned with being reflective about the ways in which we come to make such distinctions. Similarly, Sharp and Willett recognize that the activity of "line drawing" is unescapable in our thinking and acting, because it is unavoidable to consider "some relations, some beings, and some models of life as more valuable than others" (Sharp and Willett 2016, 80). A prominent contender for the drawing of such lines is the distinction between the animate and the inanimate. Without rejecting it, Sharp and Willett urge us to question this connection between animacy and moral standing and to ask why it seems so important to distinguish between relevant and less relevant others in this light—particularly given "our effort to challenge human exceptionalism and to appreciate the vast network of beings necessary to our subsistence" (80).

According to Puig de la Bellacasa, an approach that aims at decentering ethics from its humanistic pole must unsettle the view of what counts as life, and more precisely of that which is worthy of concern and care (Puig de la Bellacasa 2017, 140). Indeed, much theorizing remains bounded to a restricted understanding of *bios*, one that conceives of human flourishing and well-being independently of the flourishing and well-being of the Earth's other beings (140). However, the question that begs to be asked is whether conceiving of ethics on nonanthropocentric grounds entails the devolving of agency to all beings and things and their mutual entanglements. In addition, if we are to "stretch received concepts of agency" as Jane Bennett would have it (Bennett 2010, x), we have to ask ourselves whether the nature of the agency we ascribe to beings and things is the same, or if there are differences between, say, robots and microchips on the one hand, and human animals, nonhuman animals, ecosystems, and the rest of the Earth's beings who co-sustain life, on the other.

https://doi.org/10.1017/hyp.2020.7 Published online by Cambridge University Press

III. Caring for the Worlds of Nature

According to the line of argument I am trying to sketch here, there is an important difference between beings and things such that it is not possible to speak of agency, autonomy, or freedom in the same sense in the two cases. There are indeed nuances between diverse types of entities within each category as well, but these are not as significant from an ethical point of view as the stark contrast between the categories themselves. This argument rests on the "grammar of animacy" as put forward by Potawatomi scholar Robin Wall Kimmerer, whose gift-reciprocity outlook relies on a distinction between what is alive and what is not (Kimmerer 2013). The idea, of course, is to begin by extending the realm of animacy in such a way as to become aware of the life that pulses through all beings, with particular attention to those who have been objectified by the imaginaries of mastery of our dominant social systems. Kimmerer illustrates this by showing how Indigenous languages "remin[d] us, in every sentence, of our kinship with all of the animate world"—which is defined in contrast to the world of human-made objects and things (Kimmerer 2013, 60–61).

There is, therefore, a considerable distance between Kimmerer's position and the general ethos of the strong variant of new materialist and posthuman approaches that I discussed above, whose aim is precisely to disrupt ontological distinctions between the animate and the inanimate, or between organic and inorganic matter (see, for instance, Coole and Frost 2010, 9; see also Bennett 2010, x, among others). In this respect, Puig de la Bellacasa's thought offers a kind of compromise between the two, because although she takes the naturecultural ontological continuum as a starting point for her own reflections, she nevertheless seems to be working with and against it. She begins by cautioning us about using the category of the *nonhuman* as an umbrella term that encompasses a plurality of entities, given that such a broad understanding will cause the conflation of beings and things that are radically different from each other (Puig de la Bellacasa 2017, 143). She then draws a distinction between the worlds of *bios* (or *phusis*) and *techne*, which refer respectively to biological modes of life and to technological assemblages.[7] Her argument is that decentering agency from its humanistic roots will have different implications depending on whether we are concerned with dis-objectification in the one or in the other. Moreover, particular configurations of human and nonhuman entities will vary from one another in ways that reflect the distinct nature of the things (or "artifacts") and beings (or "animal/organic entities") under consideration (143).

Puig de la Bellacasa wants to draw our attention to the fact that the concrete problems that emerge in practice raise different ethical concerns that are contingent upon the specificities of whatever it is that we are looking at. In this respect, it is possible to argue that her argument relies on the importance of vulnerability, since she recognizes that living bodies have an organic propensity to being affected by disease, sickness, impairments, injuries, and suffering—which is just not the case when it comes to technological matter. In addition, it is important to note that living bodies in Puig de la Bellacasa's sense are not exclusively human animal bodies, but any vulnerable alterity. And the ethical implications of human-induced "pain, death, and even extinction" (143) of vulnerable alterities are incommensurable with the sort of damage or mistreatment that machines and other artifacts could be said to suffer in some relevant sense.

This is not to say that we should be entirely indifferent to how technological assemblages fare. However, the value that ought to be conferred on the latter must be instrumental, which means that our normative concerns should not be about the objects themselves, but rather about the vulnerable lifeforms who relate to these objects in

https://doi.org/10.1017/hyp.2020.7 Published online by Cambridge University Press

some way or another. There are, of course, different levels of consideration, which entail varying degrees of commitment and obligation to care. And I want to argue that these levels and degrees of consideration and caring for the worlds of *techne*, to use Puig de la Bellacasa's terminology, must always be subject to the well-being and sustainability of the worlds of *bios*. It could be argued that caring for computers, phones, and other things that contribute to the well-functioning of (most of) our societies as they are currently structured ought to be integral to an appropriate ethical outlook. The reason, one might say, is that attaching importance to these objects is required to fight against the compulsory obsolescence that is endemic to capitalist economic processes of production and consumption. Furthermore, one might conceive of caring for artifacts as forming part of an ecological ethics, since it could help us counter the waste of consumerism and therefore lessen the environmental damage that results from economic expansion.

Although not entirely wrong, this way of framing the question is misdirected and impedes us from looking beyond mere band-aid solutions that attempt to mitigate climate change without confronting upfront the predatory paradigm that is responsible for the problem. At its worst, a perspective that insists on the importance of caring for artifacts may be a cloak for business as usual, and hence for collective disempowerment and political inaction. In fact, such a perspective resonates with the atomistic outlooks that I criticized in the first section of this essay. This is evident in how it postulates that stabilizing the currently disruptive relationship between human animals and other-than-human beings and things takes place at the individual level. In other words, it prescribes an atomized response to a structural problem.

It is nevertheless true that the entanglements between the worlds of *bios* and *techne* are intensifying and that life itself is increasingly reliant on technoscience as a solution for all kinds of issues, including "climate change, economic recessions, food crises, infertility, or access to health care or information" (Puig de la Bellacasa 2017, 17). It is therefore not surprising to witness a growing interest on the part of governments, transnational corporations, and private think tanks (among others) in using technological development as a strategy to tackle environmental "externalities," to use their own language. This is the impetus behind the coalescence around geoengineering as a purported solution to the "climate change crisis." Broadly speaking, geoengineering refers to the deliberate technological intervention into the worlds of nature in order to alleviate the anthropogenic transformation of the ecosystems. As Tina Sikka explains, geoengineering schemes are divided into two main categories: the first one comprises solar management technologies, such as the injection of sulfate aerosols into the stratosphere in order to reflect sunlight to cool down the earth. The second one corresponds to carbon dioxide removal, and its objective is to capture and store CO2 emissions directly from the atmosphere (Sikka 2018, 19).

The use of geoengineering is extremely attractive to those with vested interests in the current unsustainable modes of production because it purports to address some of the effects of the economic system without changing its overall structure. It is no surprise to see the names of billionaire entrepreneurs such as Bill Gates and Elon Musk as the leading investors in geoengineering research, as well as think tanks such as The Cato Institute, The Hudson Institute, and The American Enterprise Institute as prominent supporters of the project (see Sikka 2018, 23). The idea of geoengineering as a possible solution to environmental harm is not only directly in line with neoliberal reason, but is also constitutive of the ethos of mastery and objectification that has led to the destruction of the interdependent relationships that sustain life on earth. Although multifaceted, geoengineering is inherently extractivist: the use of technology to perpetuate the

https://doi.org/10.1017/hyp.2020.7 Published online by Cambridge University Press

acquisition of territories and to expropriate natural resources under the justification of what economists take to be "economic growth" is but an expression of colonial expansion.[8] As such, the political struggle against anthropogenic climate change calls for the rejection of technoscientific fixes like geoengineering that are premised on a mistaken understanding of the worlds of nature and of the ways in which we ought to relate to them.

Indeed, and to come back to the first section of this essay, the fact that something like geoengineering has even become a serious option is telling of the ontological and epistemological underpinnings of the hegemonic scientific outlook. The particularity of the latter is to have achieved what Taylor has called a "disengaged modern consciousness," whereby we come to see the world as a "neutral environment" and ourselves as outside of it, which leads us to adopt an objectifying stance toward it (Taylor 1985a; 1992; 2007). An immediate consequence of this is the blurring of the distinction between *techne* and *bios*, which is fundamental to account for vulnerable beings and the relations they entertain, and thus to make the qualitative evaluations on which an appropriate ecological ethics ought to be built. Moreover, the existence of a consensus among the global elite around something like geoengineering resonates with Ephraim's argument that the domain of "nature" has been sequestered by experts and professionals whose purported legitimacy rests on the "aura of inevitability" that is conferred on the natural sciences' appeal to authority (Ephraim 2018, 2). These experts and professionals end up not only speaking on behalf of nature, but also prescribing a treatment that is no better than the disease they are responsible for in the first place. A fundamental rejection and critique of such authority—which is made possible by the politicization of "nature"—is therefore in order.

Contrary to some strands of new materialist and posthumanist thinking, then, I want to argue that a certain degree of separation between organic and inorganic worlds is required so that we are able to articulate forms of caring that sustain life. It is precisely based on this separation that biomimicry activities such as permaculture are possible. However, it is important to note that this separation should not be understood as an ontological split that entails unintelligibility, such as the one prescribed by the "two-sciences, two-ontologies" settlement. The latter is pernicious to nature because it produces an ethical gap between social systems and ecosystems, and posits that such unintelligibility can be overcome when mediated by those who are supposedly able to do so. Ephraim's call to democratize this role of mediator is urgently needed in order to contest the political and economic order that ventriloquizes the voices of nonhuman constituencies (Ephraim 2018, 7).

IV. The Nature of Vulnerability and the Vulnerability of Nature

To return to permaculture, I want to briefly focus on Puig de la Bellacasa's argument for an ethics that draws on the observation of natural ecosystems and attempts to reproduce their symbiotic patterns. Permaculture ethics are premised on the transformation of existing relations between and among human animals and more-than-human beings such that our unsustainable and self-destructive relationships can be replaced by sustainable forms of interaction (see also Tully 2019b). The idea is to embody an ecology of practices of care that is attuned to the needs of a community of heterogeneous beings, whose embeddedness in relationships of interdependency warrants nurturing and protection. Puig de la Bellacasa argues that the cultivation of ongoing practices of giving and receiving based on permaculture presupposes that we human animals are

https://doi.org/10.1017/hyp.2020.7 Published online by Cambridge University Press

participants like any other in the "web of Earth's living beings" (Puig de la Bellacasa 2017, 129). This resonates with the posthumanist and new materialist urge toward moving our picture of agency, causation, and power away from a humancentric to a more-than-humancentric perspective.

Yet the fact that human animals are not independent of, or superior to, the worlds of nature does not mean that we don't have specific obligations and responsibilities—toward nature and toward one another (Puig de la Bellacasa 2017, 129). As Sharon Krause argues, given that we human animals can evaluate our courses of action and make distinctions between those that are of higher and those that are of lesser value—as she puts it, we "stand in reflective relationship to [ourselves]"[9]—it is therefore possible to attribute responsibility for our actions (Krause 2011, 310). This, of course, is not the case with other-than-human beings because they are not answerable in the ways that can be required of human animals, and hence they cannot be held accountable to others in the matter of their doings. There is even less ground for imputing this to inanimate things, and scholars such as Puig de la Bellacasa and Krause seem to be well aware of this.

But this is not an uncontroversial claim in the literature that I am dealing with in this essay. Some of the scholars who propose an alternative way of thinking about materiality have put forward a conception of agency that ascribes "directedness" to matter (Coole and Frost 2010, 10). Indeed, they understand materiality as "active, self-creative, productive," and as "exhibiting immanently self-organizing properties" (9, 13). An important part of this revision of the notion of agency is to challenge taken-for-granted philosophical assumptions about "the subject" that rely on a particular view of the nature of personhood, one that equates agency with the capacity for intentional action. This perspective therefore defines agency in contrast to mere impulses, involuntary action, or even first-order desires.[10] Seen in this light, agency is connected to autonomy, authenticity, and responsibility (Stoljar 2018, 233), which are capacities that serve to distinguish between agential beings and nonagential entities, given that they are necessary prerequisites for someone to qualify as an agent. On this view, then, to exercise agency is to be able to participate in ongoing activities such as "planning, intending, developing long-term projects," as well as to have the capacity to engage in "imaginative projection" (Mackenzie 2014, 154).

There is no doubt that such a conception of agency is constrictive, since it relies on the presumption that the "normal" person is "able-minded" and "able-bodied." This is so because agency is construed in terms of the mental capacity to conceive of ways of acting (as well as to evaluate competing courses of action) and of the physical ability to act according to one's deliberate goals. And this seems to be the case even within those relational frameworks that take issue with the traditional conception of the "rational agent"—and that focus on the social nature of someone's capacities and abilities or on the ways in which relationships impede or enhance those capacities and abilities (see, in particular, Mackenzie and Stoljar 2000; see also Nedelsky 2011). Relational approaches have replaced the picture that holds that rational agents are those human animals who are capable of autonomous and independent action with an account that conceives of agency as socially embedded and deeply tied to a person's embodiment and affectivity. This is a considerable step forward, but I think that some variants of the relational approach still hold onto a view that posits ableist norms as ideal standards toward which we have a responsibility to strive. In this sense, social relationships constitute the condition of possibility for the full exercise of human agency, since it is through them that people who are situated at different points on a spectrum of ability and disability can "formulate life plans and act in accordance with their values and

https://doi.org/10.1017/hyp.2020.7 Published online by Cambridge University Press

goals" (Nedelsky 2011, 166). The idea, then, is to bring people as close as possible to realizing their full agentic "potential."[11]

So the significant contribution of new materialisms and posthumanism is to have pushed the critique of the rational subject even further and to have developed an account of agency that avoids the problem of ableism altogether. However, such an account goes too far in the opposite direction: not only does it entail that human animals have no special standing whatsoever—which is something I agree with—but it also places agency "at the mercy of forces, energies, practices" (Grosz 2002, 468) and distributes it horizontally across a flattened ontological world (Bennett 2010, 9–10). A problem that emerges with this understanding of agency is that we end up stripping the concept of its normative grip. Indeed, it is possible to argue that if everything has agency in the same sense, then nothing exercises agency in a meaningful way. The question that immediately comes to mind, then, is why does agency matter? If we ascribe agency to the chair on which I am sitting right now, then we ought to radically differentiate it from the agency of the tree from which the chair was made and from that of the people who built it. Otherwise we will fail to capture what is normatively salient about agency, which is that it helps us recognize matters of importance. And neglecting the latter contributes to the atomization problem I referred to earlier, since it obscures the structural apparatuses of power that are at the basis of our unsustainable relationships to the earth. To put it differently, if we want to call attention to ecosocial injustices and inequalities, then we need to direct our concern for agency toward the vulnerable beings who are embedded in particular relations. To be ethically concerned with the agency of a commodity distracts our attention away from the relations of power, oppression, dominance, and subordination that are constitutive of its production.

Living beings are necessarily embedded in and depend on the relationships that constitute and sustain them. An individual rock removed from its geological context is not animate, nor vulnerable, and hence does not elicit responses of care from other beings who are in a position to provide it. But when conceived of from an ecological point of view, the world appears to us in a different light. We become aware of the myriad ways in which beings are connected to one another, and how those connections enable them to sustain themselves and the other living systems with which they interact. This brings me to the last point I want to make here. Central to care ethics is the idea that relationships of giving and receiving are fundamental for responding to the facts of dependency and vulnerability. But a concomitant insight is that we need to maintain "a critical distance toward those relations" (Robinson 1998, 30, cited in Mihai 2019, 5) so that we can determine which are worth nurturing and protecting and which are not. And in order to be able to distinguish between better and worse relationships, we need to ground our ways of thinking and acting on an understanding of the nature of vulnerability that is attuned to the vulnerability of the worlds of nature. This is the sort of teaching we can draw from permaculture and from the ways in which it responds to the existential necessities of a plurality of interdependent beings who seek to co-sustain life. As Puig de la Bellacasa shows, an ethics of care based on permaculture not only enables us to integrate ecological principles into our social worlds, but also cultivates our awareness of the normative significance of our daily engagements with the multiplicity of worlds around us. In particular, it draws our attention toward ensuring the subsistence of the community of living beings of which we are a part, and hence of the plurality of communities that are interrelated and depend on one another.

But permaculture is just one example, and it is important to understand it in light of its historical and contextual specificities.[12] There are, of course, many other sources

https://doi.org/10.1017/hyp.2020.7 Published online by Cambridge University Press

from which to draw the kind of ethical principles I am trying to describe here. Kimmerer shows that for Indigenous peoples, certain objects can acquire meaning when they are constitutive of relations between beings (Kimmerer 2013, 26). This complicates the picture I am offering in these pages, which relies on a fundamental distinction between beings and things—or between *bios* and *techne*. For Anishinaabe, as for most Indigenous peoples on Turtle Island, a canoe is more than a mere "object"; it may not be a being, but it certainly is not a commodity. There are many reasons for this, but the one I want to explore here illustrates Kimmerer's point. Lindsay Borrows's narrative of Indigenous resurgence recounts the building of a birchbark canoe and tells us about the role this activity plays in her community: from the children who collect the raw materials for its construction, to those who carry buckets of water to ensure that it remains wet, to the adults who craft the canoe, and to the grandparents who sing songs and share their teachings (L. Borrows 2018, 155). The value of the canoe lies clearly in the way in which it fosters interactions between human beings and their other-than-human relatives and cultivates an awareness of their condition of interdependency. This connection to one another and to the lands and waters that Indigenous peoples have nurtured since time immemorial constitutes what Tully calls "pedagogical relationships" (Tully 2018, 87). Indeed, as Borrows concludes her account of canoe-building: "Our stories and our land are our scriptures. They provide precedents for how we should live" (L. Borrows 2018, 155). In this sense, the canoe is not just a vessel, but is rather an opportunity for a community of beings to learn from one another and to participate in the living cycles of gift-gratitude-reciprocity (Tully 2018, 87). Understanding the canoe as a gift of the birch forests, as well as the crafting of the canoe as something that is taught to us by nature, gives us an opportunity to rethink who our other living relatives and kin are, and hence encompass the forests, rivers, streams, mountains, seasons, ecosystems, and the earth as a whole (Kimmerer 2013, 355; Tully 2018, 87).

What we can learn from this for an ecological ethics attuned to the vulnerability of beings is that our other-than-human relatives give us countless gifts that are at the basis of the interdependency of life forms and of their co-sustainability. And this is something that many of us living within unsustainable social systems that are disembedded from nature fail to realize. Thus, stretching received concepts of agency needs to be done carefully in order not to obscure the relationships that are constitutive of that which ought to be considered as matters of importance. The objects to which new materialists and posthumanists seek to ascribe agency, vitality, and animacy have to be evaluated in the light of the kinds of relationships of which they are a part. The criteria used to determine whether such relationships are better or worse ought to include the degree to which they are integrated in symbiotic webs and cycles of gift-gratitude-reciprocity, and hence the extent to which they respond to the vulnerability of nature.

V. The Relations that Matter

Recent critical work has aimed at decentering political thought from a humancentric to a more-than-humancentric perspective. This has resulted in a fundamental rethinking of the relationship between ontology and political theory and, consequently, of the "matter" to which we assign normative importance. New materialisms and posthumanisms are at the forefront of this theoretical paradigm shift, at least when it comes to the growing influence they have had on the field in recent years. Drawing on science and technology studies, and hence challenging traditional disciplinary boundaries, these

https://doi.org/10.1017/hyp.2020.7 Published online by Cambridge University Press

approaches have launched an incisive critique of the oppositional view of nature and politics. The latter entails an ontological dualism and implies mutual unintelligibility between the realms, which is why it prescribes two incommensurable scientific paradigms to study each of them separately. Moreover, it relegates the natural ontological world to an apolitical sphere that is to be investigated by scientific experts whose authority lies in their professed understanding of nonhuman matter. Concomitantly, the realm of human affairs is conceived of as disembedded from nature, and hence this view assumes that nonhuman concerns are not immediately relevant for ethical reflection. As we saw, this "two sciences, two ontologies" picture has been brought under serious scrutiny by new materialists and posthumanists, who suggest that it ought to be replaced by an ontological monism that enables us to politicize the realm of nature, as well as to naturalize the political. This is the idea behind the nature-cultural ontological continuum, whose postulate is that the existence of matter on this planet is unavoidably entangled.

In this essay, I have examined important ethical and political implications of the new materialist and posthumanist challenge to how nature and politics have been traditionally construed. I began by discussing Ephraim's critique of the new materialist rejection of the "two sciences, two ontologies" settlement, and argued that she is right to put into question the fact that some of them take natural-scientific authority for granted. Despite the new materialist critique of the dissociation of the political and the natural worlds, a number of its proponents fail to problematize the imperious assumption that experts and professionals should speak on behalf of nature. This forecloses the possibility of other forms of knowledge having a say in the charting of paths toward sustainable futures. But I pushed Ephraim's argument further and questioned her monistic ontological outlook, which is a premise that she shares with new materialist and posthumanist approaches. The rejection of ontological dualism need not entail a "one world, one science" perspective—which posits that it is possible to understand matter as a single, undifferentiated object of study. I argued instead that a pluralistic approach is needed in order to capture the multiplicity of the heterogeneous yet interdependent worlds that constitute reality. This is so because on a pluralistic view, identifying and rejecting the imperialist imposition of uniformity and homogeneity is the condition of possibility for intelligibility and critical mutual understanding.

Furthermore, even though new materialist and posthumanist contributions to political theory are valuable for having challenged human exceptionalism, it is nevertheless important to cast a critical eye upon the ethical and political implications of their ontological project. I focused particularly on how the decentering of human agency that the strong variant advocates for raises a set of concerns that need to be addressed in developing an appropriate ecological ethics. My argument is that the latter must be attuned to the vulnerability of living beings who co-sustain life on earth. Seen in this light, the stretching of the notion of agency can be problematic, given that if we extend it too much it can lose its normative grip. Hence the importance of paying attention to differences between kinds of entities, and between the types of interactions they have with one another and to the larger environment in which they are embedded. Following Puig de la Bellacasa's distinction between *bios* and *techne*, a first fundamental step toward highlighting the normative significance of such differences is to recognize that beings and things cannot be tarred with the same brush. And the problem with the notion of agency that a particular strand of new materialism and posthumanism puts forward is precisely that it undermines the sort of vocabulary of worth that enables us to ascribe different levels of importance to whatever is under consideration.

https://doi.org/10.1017/hyp.2020.7 Published online by Cambridge University Press

Finally, I have argued that an adequate picture of why agency matters ought to capture a dimension of concern for the relations that constitute and sustain the entity in question—instead of conceiving of "it" as a "thing" with a distinct and separate existence. Otherwise we will fail to establish the sort of qualitative distinctions that are needed to see what is wrong with projects such as geoengineering. Indeed, the atomistic view that characterizes the latter overlooks the structural ordering that is responsible for the problem that technological fixes are purportedly set to solve in the first place. What is required is that we assess relationships between beings and things in the light of the extent to which they respond to the vulnerability of nature. Only then will we be able to learn to live in solidarity and complementarity with the plurality of other-than-human worlds that sustain life.

Acknowledgments. I wish to thank Anouck Alary, Avigail Eisenberg, Jim Tully, and *Hypatia*'s editorial board and anonymous reviewers for generously reading previous drafts of this essay, and for offering constructive comments and suggestions. I also wish to express special gratitude to Anouck; it is through dialogue with her that the ideas for this essay took form.

Notes

1 New materialisms and posthumanism consist of two related but different schools of thought. It is important to note that they comprise a diverse group of scholars who often disagree on important issues, such as about the flattening of ontology. Indeed, although these scholars are all committed to decentering ethical and political reflection from its anthropocentric locus, they nevertheless disagree about the degree to which ontology should be flattened. On one end of the spectrum are those (Karen Barad and Jane Bennett, for instance) who blur the distinction between the organic and inorganic, whereas on the other end, scholars such as Eduardo Kohn and Anna Lowenhaupt Tsing insist on differentiating the animate from the inanimate. For the purposes of this essay, I will refer to the latter as "weak" and to the former as "strong" versions of new materialisms and posthumanisms. There are of course many nuances to this rough picture, including an intermediary position (held by Hasana Sharp, María Puig de la Bellacasa, and Cynthia Willett, to name a few). See Barad 2007; Alaimo and Hekman 2008; Bennett 2010; Coole and Frost 2010; Wolfe 2010; Connolly 2011; Ingold 2011; Braidotti 2013; Kohn 2013; Tsing 2015; Frost 2016; Haraway 2016; Sharp and Willett 2016; Grosz 2017; Puig de la Bellacasa 2017; Tsing et al. 2017, Braidotti 2019; among others.

2 The work of other philosophers and political theorists who opposed behaviorism has also been prominent. Ephraim mentions Leo Strauss, Hannah Arendt, Sheldon Woldin, Jürgen Habermas, and Hannah Pitkin (Ephraim 2018, 11; see also Dreyfus 1991). For accounts that emphasize the influence of Taylor's work on the subject, see Bevir and Blakely 2015, 31–44; 2018a; and 2018b.

3 According to Ephraim, the most influential "political" scholars to have "visited the journals and labs of natural scientists" are Bruno Latour and William Connolly. See Connolly 2002; Latour 2004.

4 It is worth noting that Ephraim disregards the fact that scholars such as Karen Barad, Samantha Frost, Elizabeth Wilson, as well as Joanna Latimer and Mara Miele, in particular, have engaged seriously with scientific discourses (Wilson 2004; Barad 2007; Latimer and Miele 2013; Frost 2016). Yet even such scholars seem to privilege a single-world perspective, which accords to natural science the unquestioned status of *the* legitimate form of knowledge, particularly when it comes to inquiries into the natural world.

5 This restricted view of democracy corresponds to the modern mode of civil citizenship, which James Tully contrasts to the civic practices of democratic participation (Tully 2008; 2014).

6 Sharp's notion of "renaturalization" is, of course, different from the kind of "naturalism" that I discussed earlier.

7 Note that the English translation of *techne* is craft or art, which evokes the idea of human-made objects.

8 For a discussion of extractivism, see de la Cadena and Blaser 2018, 11.

9 It is worth noting that Krause adds that "[t]his reflexivity need not imply rational autonomy or personal sovereignty . . ." (Krause 2011, 310).

10 Taylor's conception of human agency is grounded on the distinction between first-order and second-order desires. On this view, full human agency consists in people's power to evaluate their desires—or, in other words, in people's capacity to have desires about desires. See Taylor 1985b; see also Stoljar 2011.

https://doi.org/10.1017/hyp.2020.7 Published online by Cambridge University Press

11 This resonates with Barbara Arneil's critique of Taylor's "Politics of Recognition." See Arneil 2009.
12 Without going into detail, it is important to note that even if it is based on ancestral practices, the development of permaculture as a systematic set of principles has strong roots in Western worlds.

References

Alaimo, Stacy, and Susan Hekman. 2008. *Material feminisms*. Bloomington: Indiana University Press.
Arneil, Barbara. 2009. Disability, self-image, and modern political theory. *Political Theory* 37 (2): 218–42.
Barad, Karen. 2007. *Meeting the universe halfway: Quantum physics and the entanglement of matter and meaning*. Durham, N.C.: Duke University Press.
Barad, Karen. 2012. Interview with Karen Barad. In *New materialism: Interviews and cartographies*, ed. R. Dolphijn and I. van der Tuin. Ann Arbor, Mich.: Open Humanities Press.
Bennett, Jane. 2010. *Vibrant matter: A political ecology of things*. Durham, N.C.: Duke University Press.
Bevir, Mark, and Jason Blakely. 2015. Naturalism and anti-naturalism. In *Routledge handbook of interpretive political science*, ed. M. Bevir and R. A.W. Rhodes. London: Routledge.
Bevir, Mark, and Jason Blakely. 2018a. Why political science is an ethical issue. *Political Studies* 66 (2): 425–41.
Bevir, Mark, and Jason Blakely. 2018b. *Interpretive political science*. Oxford: Oxford University Press.
Borrows, Lindsay Keegitah. 2018. *Otter's journey through Indigenous language and law*. Vancouver: University of British Columbia Press.
Borrows, John. 2002 *Recovering Canada: The resurgence of Indigenous law*. Toronto: University of Toronto Press.
Borrows, John. 2018. Earth-bound: Indigenous resurgence and environmental reconciliation. In *Resurgence and reconciliation: Indigenous–settler relations and earth teachings*, ed. J. Borrows and J. Tully. Toronto: University of Toronto Press.
Braidotti, Rosi. 2013. *The posthuman*. Cambridge, UK: Polity.
Braidotti, Rosi. 2019. *Posthuman Knowledge*. Cambridge, UK: Polity.
Connolly, William. 2002. *Neuropolitics: Thinking, culture, speed*. Minneapolis: University of Minnesota Press.
Connolly, William. 2011. *A world of becoming*. Durham, N.C.: Duke University Press.
Coole, Diane, and Samantha Frost, eds. 2010. *New materialisms: Ontology, agency, and politics* Durham, N.C.: Duke University Press.
de la Cadena, Marisol. 2010. Indigenous cosmopolitics in the Andes: Conceptual reflections beyond "politics." *Cultural Anthropology* 25 (2): 334–70.
de la Cadena, Marisol, and Mario Blaser, eds. 2018. *A world of many worlds*. Durham, N.C.: Duke University.
Dreyfus, Hubert L. 1991. *Being-in-the-world: A commentary on Heidegger's* Being and Time, *Division 1*. Cambridge, Mass.: The MIT Press.
Ephraim, Laura. 2018. *Who speaks for nature? On the politics of science*. Philadelphia: University of Pennsylvania Press.
Frost, Samantha. 2011. The implications of the new materialisms for feminist epistemology. In *Feminist epistemology and philosophy of science*, ed. H. E. Grasswick. London: Springer.
Frost, Samantha. 2016. *Biocultural creatures: Toward a new theory of the human*. Durham, N.C.: Duke University Press.
Grosz, Elizabeth. 2002. A politics of imperceptibility: A response to "Anti-racism, multiculturalism and the ethics of identification." *Philosophy & Social Criticism* 28 (4): 463–72.
Grosz, Elizabeth. 2017. *The incorporeal: Ontology, ethics, and the limits of materialism*. New York: Columbia University Press.
Haraway, Donna. 1991. *Simians, cyborgs, and women: The reinvention of nature*. New York: Routledge.
Haraway, Donna. 2016. *Staying with the trouble: Making kin in the Chthulucene*. Durham, N.C.: Duke University Press.
Ingold, Tim, 2011. *Being alive: Essays on movement, knowledge, and description*. New York: Routledge.
Kimmerer, Robin Wall. 2013. *Braiding sweetgrass: Indigenous wisdom, scientific knowledge, and the teachings of plants*. Minneapolis: Milkweed Editions.
Kohn, Eduardo. 2013. *How forests think: Toward an anthropology beyond the human*. Berkeley: University of California Press.

https://doi.org/10.1017/hyp.2020.7 Published online by Cambridge University Press

Krause, Sharon. 2011. Bodies in action: Corporeal agency and democratic politics. *Political Theory* 39 (3): 299–324.

Laden, Anthony S. 2012. *Reasoning: A social picture*. Oxford: Oxford University Press.

Latimer, Joanna, and Mara Miele, 2013. Naturecultures? Science, affect and the non-human. *Theory, Culture & Society* 30 (7/8): 5–31.

Latour, Bruno. 1993. *We have never been modern*. Cambridge, Mass.: Harvard University Press.

Latour, Bruno. 2004. *Politics of nature: How to bring the sciences into democracy*. Cambridge, Mass.: Harvard University Press.

Leff, Enrique. 2014. *La Apuesta por la vida. Imaginación sociológica e imaginarios sociales en los territories ambientales del sur*. Mexico City: Siglo Veintiuno.

Mackenzie, Catriona. 2014. Embodied agents, narrative selves. *Philosophical Explorations* 17 (2): 154–71.

Mackenzie, Catriona, and Natalie Stoljar, eds. 2000. *Relational autonomy: Feminist perspectives on autonomy, agency, and the social self*. New York: Oxford University Press.

Markell, Patchen. 2014. The moment has passed: Power after Arendt. In *Radical future pasts: Untimely political theory*, ed. R. Coles *et al*. Lexington: University Press of Kentucky.

Mihai, Mihaela. 2019. The caring refusenik: A portrait. *Constellations* 26 (1): 148–62.

Nedelsky, Jennifer 2011. *Law's relations. A Relational theory of self, autonomy and law*. Oxford: Oxford University Press.

Nelson, Melissa K., and Dan Shilling, eds. 2018. *Traditional ecological knowledge: Learning from Indigenous practices for environmental sustainability*. Cambridge, UK: Cambridge University Press.

Puig de la Bellacasa, María. 2017. *Matters of care: Speculative ethics in more than human worlds*. Minneapolis: University of Minnesota Press.

Robinson, Fiona. 1998. *Globalizing care: Ethics, feminist theory, and international relations* Boulder, Colo.: Westview Press.

Sharp, Hasana. 2011. *Spinoza and the politics of renaturalization*. Chicago: University of Chicago Press.

Sharp, Hasana. 2016. Endangered life: Feminist posthumanism in the anthropocene? In *Feminist philosophies of life*, ed. H. Sharp and C. Taylor. Montreal and Kingston: McGill-Queens University Press.

Sharp, Hasana, and Cynthia Willett. 2016. Ethical life after humanism: Toward an alliance between an ethics of eros and the politics of renaturalization. In *Feminist philosophies of life*, ed. H. Sharp and C. Taylor. Montreal and Kingston: McGill-Queens University Press.

Sikka, Tina. 2018. *Climate technology, gender, and justice: The standpoint of the vulnerable*. Cham, Switzerland: Springer.

Stoljar, Natalie. 2011. Informed consent and relational conceptions of autonomy. *Journal of Medicine and Philosophy* 36 (4): 375–84.

Stoljar, Natalie. 2018. Answerability: A condition of autonomy or moral responsibility or both? In *The social dimensions of moral responsibility*, ed. K. Hutchinson, M. Oshana, and C. Mackenzie. Oxford: Oxford University Press.

Taylor, Charles. 1985a. Introduction. In *Human agency and language: Philosophical papers Vol. I*. Cambridge, UK: Cambridge University Press.

Taylor, Charles. 1985b. What is human agency? In *Human agency and language: Philosophical papers Vol. I*. Cambridge, UK: Cambridge University Press.

Taylor, Charles. 1985c. Self-interpreting animals. In *Human agency and language: Philosophical papers Vol. I*. Cambridge, UK: Cambridge University Press.

Taylor, Charles. 1985d. Interpretation and the sciences of man. In *Philosophy and the human sciences: Philosophical papers Vol. II*. Cambridge, UK: Cambridge University Press.

Taylor, Charles. 1985e. Understanding in human science. In *Philosophy and the human sciences: Philosophical papers Vol. II*. Cambridge, UK: Cambridge University Press.

Taylor, Charles. 1985f. Atomism. In *Philosophy and the human sciences: Philosophical papers Vol. II*. Cambridge, UK: Cambridge University Press.

Taylor, Charles. 1992. *Sources of the self: The making of the modern identity*. Cambridge, Mass.: Harvard University Press.

Taylor, Charles. 2007. *A secular age*. Cambridge, Mass.: Harvard University Press.

Tsing, Anna L. 2015. *The mushroom at the end of the world: On the possibility of life in capitalist ruins*. Princeton: Princeton University Press.

https://doi.org/10.1017/hyp.2020.7 Published online by Cambridge University Press

Tsing, Anna L., Nils Bubandt, Elaine Gan, and Heather A. Swanson, eds. 2017. *Arts of living on a damaged planet: Ghosts and monsters of the anthropocene*. Minneapolis: University of Minnesota Press.
Tully, James. 2008. On local and global citizenship: An apprenticeship manual. In *Public philosophy in a new key, Volume 2: Imperialism and civic freedom*. Cambridge, UK: Cambridge University Press.
Tully, James. 2014. On global citizenship. In *On global citizenship: James Tully in dialogue*. London: Bloomsbury.
Tully, James. 2016. Deparochializing political theory and beyond: A dialogue approach to comparative political thought. *Journal of World Philosophies* 1 (1): 51–74.
Tully, James. 2018. Reconciliation here on earth. In *Resurgence and reconciliation*, ed. M. Asch, J. Borrows, and J. Tully. Toronto: University of Toronto Press.
Tully, James. 2020a. Life sustains life 1. Value: social and ecological. In *Nature and value*, ed. Akeel Bilgrami. New York: Columbia University Press.
Tully, James. 2020b. Life sustains life 2. The ways of re-engagement with the living earth. In *Nature and value*, ed. Akeel Bilgrami. New York: Columbia University Press.
Turner, Nancy J. 2005. *The earth's blanket: Traditional teachings for sustainable living*. Vancouver: Douglas & MacIntyre.
Wilson, Elizabeth. 2004. *Psychosomatic: Feminism and the neurological body*. Durham, N.C.: Duke University Press.
Wolfe, Cary. 2010. *What is posthumanism?* Minneapolis: University of Minnesota Press.

Didier Zúñiga is a PhD candidate in political theory at the University of Victoria, British Columbia. His research interests lie primarily in democratic theory, care ethics, environmental philosophy, and feminist philosophy. He is currently completing a dissertation entitled "Relational ethics in a world of many worlds. An ecosocial theory of care, vulnerability, and sustainability." (dzuniga@uvic.ca)

Cite this article: Zúñiga D (2020). Nature's Relations: Ontology, Vulnerability, Agency. *Hypatia* **35**, 298–316. https://doi.org/10.1017/hyp.2020.7

https://doi.org/10.1017/hyp.2020.7 Published online by Cambridge University Press