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Resisting Anthropocene Neoliberalism: Towards New Materialist Commoning?

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1. Introduction

Materiality lies inescapably at the heart of the commons, and this chapter explores the idea that a New Materialist onto-epistemology might offer an important contribution to the power of commoning as ontological politics.[1] In particular, the chapter explores what it might mean to think of non-human actants as commoners — that is to say, to think of non-human actants (both organic and inorganic) as lively partners in commons entanglements. What might that mean for the ongoing challenge of living together, as commoners, in a world facing multiple crises?

Bollier and Helfrich suggest that commons, which are found all over the world, express a deep and irrepressible human longing and that "the process of *commoning* — of joint action, of cre-

1 Escobar insists that the commons should be understood as just such a politics: Arturo Escobar, "Commons in the Pluriverse," in *Patterns of Commoning,* eds. David Bollier and Silke Helfrich (Amherst: Off the Common Books, 2014), 348–60.

ating things together, of cooperating to meet shared goals — is ubiquitous."[2] What happens, then, when we imagine commons to be ubiquitous because they are first and foremost a living mesh of processes of living-together reflecting the nature of lively materiality itself? What happens when we take that as far as embracing the "agency" of inorganic matter, not stopping at the boundaries of "life?" What insights, ontological, epistemological, and ethical, emerge? What gains might there be for a political ecology of the commons?

The discussion in this chapter has the following structure: First, I briefly introduce commons, commoning, and the idea of "nature" as a fractious frontline between opposing forms of ontological politics. Next, I position the urgency of ontological politics in relation to the Anthropocene-Capitalocene. Finally, I bring the commons into conversation with New Materialism in order to think about the potential implications of embracing non-human actants as commoners. Might the kind of ethical and epistemological attentiveness introduced by New Materialist ontology produce ways of living *against* the deadening objectifications performed by neoliberalism, and further underline the potency of the commons as a better way of living together in the present planetary situation?

2. Commons, Commoning and the Fractious Space of "Nature"

It is clear that for many commons scholars, commons structures express normative principles governing cooperatively designed human social relationships and are firmly located in human communities. Helfrich and Haas, for example, offering an authoritative account of commons relationalities in 2008, identified four central normative principles governing the social relationships at the heart of the commons, all of which are, in context, envisaged as governing the relations between human

2 David Bollier and Silke Helfrich, "Overture," in *Patterns of Commoning,* eds. Bollier and Helfrich, 1–12, at 1.

commoners: "fair access," "equitably shared benefit," "responsibility for preserving the resource," and "democratic and transparent decision-making."[3] Helfrich and Haas define commons as

> a shared ownership relationship, which, at the same time, entails a shared responsibility and shared beneficiary relationship. This relationship does not exist "in and of itself," that is, it is not inherent in the resource or the good. It is a social convention; it is law and norm, whether formal or informal. Or it is a behavioural pattern. In other words, the commons is fundamentally about social relationships. Commons are not the resources themselves but among individuals and a resource and individuals and each other.[4]

The definition offered by Helfrich and Haas, no matter that it accurately reflects core features of many commons, would be unlikely to go uncontested. Commons scholarship is, indeed, an increasingly lively arena. Commons certainly embrace archaic forms, but there is also an explosive multiplicity of newer commons and modes of commoning.

New forms of commoning are now so diverse that McCarthy, reviewing the field, claims that he is uncertain "how much these many new 'commons' might have in common."[5] McCarthy's central focus is on the way in which new commons forms and movements depart from earlier forms of commons understood, in the relevant scholarship, as common pool resources

3 Silke Helfrich and Jorg Haas, *The Commons: A New Narrative for our Times* (Heinrich Boll Stiftung, 2008), 7–8, http://commonstrust.global-negotiations.org/resources/Helfrich%20and%20Haas%20The_Commons_A_New_Narrative_for_Our_Times.pdf.

4 Ibid., 5. It is important to note that Helfrich has since developed a broader conception of the ontology of the commons as "differentiated relational ontology:" See David Bollier and Silke Helfrich, *Free, Fair and Alive: The Insurgent Power of the Commons* (Gabriola Island: New Society Publishers, 2019), ch. 2, "The Onto-Shift Towards the Commons".

5 James McCarthy, "Commons as Counterhegemonic Projects," *Capitalism Nature Socialism* 16, no. 1 (2005): 9–24, at 10.

and common property regimes.[6] These forms of commons, first canvassed in academic scholarship in response to Hardin's famous 1968 article, "The Tragedy of the Commons,"[7] reflect early theoretical models of the commons offered by scholars such as Ostrom.[8]

According to McCarthy, the new commons movements depart from the understandings "refined and advocated in a large and robust line of research over the past few decades"[9] in three main respects: first, they move beyond the older scholarly understandings; secondly, the kinds of commons being generated in the new commons movements are more eclectic than the "fisheries, forests and agrarian landscapes"[10] characterizing the typical subjects of the earlier research; and thirdly, new commons dynamics emerge from a far wider array of actors. McCarthy's analysis leads him to conclude that what the new commons movements *do* share — notwithstanding their myriad forms, foci and modes of expression — is "their assertion of collective ownership and rights against relentless privatization and commodification" and their movement away from traditional commons concerns with common property regimes in a heterogeneous tide of resistance against the "neoliberalization of nature."[11]

If the youthful, insurgent energies of the newer commons movements are best to be understood as a wave of resistance to neoliberalism's reduction of "nature" to a privatized, finan-

6 See, for an account of this scholarship, Elinor Ostrom, Joanna Burger, Christopher B. Field, Richard B. Norgaard, and David Policansky, "Revisiting the Commons: Local Lessons, Global Challenges," *Science* 283, no. 5412 (1999): 278–82.

7 Garrett Hardin, "The Tragedy of the Commons," *Science* 162 (1968): 1243–48.

8 See, for example, Elinor Ostrom, *Governing the Commons: The Evolution of Institutions for Collective Action* (Cambridge: Cambridge University Press, 1990).

9 McCarthy, "Commons as Counterhegemonic Projects," 10.

10 Ibid.

11 Ibid., 11.

cialized resource,[12] then much turns on the ability of commons formations to resist neoliberal capture.

It seems that it is difficult for anything at all to resist neoliberal capture. Indeed, the commons, despite the fact that commons are sometimes assumed to be inherently anti-neoliberal, already shows signs of partial capture. Caffentzis, for example, demonstrates how the notion of the "commons" is deployed to "describe very different, indeed conflicting, purposes and realities" by those invoking it,[13] actively canvassing the possibility that the commons is deployed, indeed, as "Neoliberalism's Plan B."[14]

Caffentzis reads the resurgence in commons thinking and action as the being result of a convergence between reactions to challenges facing capitalism and socialism respectively. He argues that the imperative for capitalist deployment of the commons (reflected in various contemporary vocabularies and initiatives related to "social capital," the "business community," etc.) reflects the need for capitalism itself to mediate the more self-destructive logics of neoliberalism and to "propose other models for participating in the market, besides individualism or corporatism."[15] This, then, is commons deployed as capitalist rehabilitation. Meanwhile, the anti-capitalist commons impulse pushes back against the failures of socialism and communism to offer genuinely collective modes of social organization. Anti-capitalist invocations of the commons, argues Caffentzis, draw upon the inspiration of older, archaic and pre-capitalist commons while simultaneously embracing the rise of the new com-

12 Catherine Corson and Kenneth I. McDonald, "Enclosing the Global Commons: The Convention on Biological Diversity and Green Grabbing," *The Journal of Peasant Studies* 39, no. 2 (2012): 263–83.

13 George Caffentzis, "The Future of 'The Commons': Neoliberalism's Plan B, or the Original Disaccumulation of Capital?" *New Formations* 69 (2010): 23–41, at 23.

14 Ibid. This is the title of the article and the central concern of Caffentzis's analysis.

15 Ibid., 23.

mons, "especially in ecological-energy spaces and in computational-informational manifolds."[16]

Caffentzis argues that the fact that the mantle of the commons is so easily applied or extended to so many variant situations, and the fact that commons projects are so ubiquitous, generates a certain level of ambiguity, and that the simultaneous deployment of the commons to "deal with the crisis and limits of both neoliberalism and socialism/communism/nationalism" explains "both the surprising popularity of the term and the confusion it induces."[17]

For Caffentzis, this confusion hinges, in part, upon a critical failure in commons discourse: the assumption made among anti-capitalists that commons thought and praxis is "inevitably anticapitalist—" a failure—in short—to recognize the co-existence of two kinds of commons: "(1) pro-capitalist commons that are compatible with and potentiate capitalist accumulation and (2) anti-capitalist commons that are antagonistic to and subversive of capitalist accumulation."[18]

In order to illustrate his claim about pro-capitalist commons, Caffentzis delineates the strategy of the World Bank and other institutions of global neoliberal capitalism to subvert anti-capitalist agendas. He suggests that there was a capitalist need to address popular resistance to the privatization of common property, a need that led to a neoliberal acceptance of commons (for example, of agrarian and forest commons) as being "at least as a stop-gap, transitional institution when revolts of the landless or the devastation of forests become destabilizing to the general exploitation of a territory or population."[19] In certain discursive and regulatory formations, therefore, commons can become tools of capitalist accumulation—or minimally, can be deployed to legitimize/facilitate an agenda of neoliberal capitalist predation. Caffentzis's argument on this point has considerable

16 Ibid., 24.
17 Ibid., 25.
18 Ibid.
19 Ibid., 29.

resonance with other critiques of neoliberal agendas, including those addressing neoliberal strategies in the face of climate and environmental crises and a range of related issues. Dehm, for example, convincingly argues that the features of the carbon offset scheme REDD+ (Reducing Emission from Deforestation and Forest Degradation) — which relies upon the communal efforts of indigenous peoples living in and around forests, as well as upon rights-based interventions such as tenure reform and free, prior, and informed consent — tend to operationalize the capture of indigenous forest communities within the neoliberal Green Economy.[20]

The subversion of resistance and critique, and the capture by neoliberal agendas of collective initiatives and alternative ways of being, living and thinking, is a strategy exposed time and again by critiques of neoliberal governance interventions.[21] Neoliberalism's highly interventionist construction of the preconditions for its market system, its extensive construction of capital and finance-friendly environments,[22] and its production of neoliberal subjects in the service of its imperatives, form the logic driving the application of adaptive strategies to the subversion of commons, and this logic is evident in the World Bank's eager recruitment of "'common property management groups among the 'civil society' institutions."[23] Neoliberal exploitation of the productivity of the commons is transparent in such initiatives and developments, and Caffentzis points out that the

20 Julia Dehm, "Indigenous Peoples and REDD+ Safeguards: Rights as Resistance or as Disciplinary Inclusion in the Green Economy?" *Journal of Human Rights and the Environment* 7, no. 2 (2016): 170–217.

21 For example, that provided by Timothy W. Luke, "On Environmentality: Geo-Power and Eco-Knowledge in the Discourses of Contemporary Environmentalism", *Cultural Critique (The Politics of Systems and Environments, Part II)* 31 (1995): 57–81. See also, for an extensive and celebrated Marxist deconstruction of neoliberalism, David Harvey, *A Short History of Neoliberalism* (Oxford: Oxford University Press, 2005).

22 Robert Fletcher, "Neoliberal Environmentality: Towards a Post-Structuralist Political Ecology of the Conservation Debate," *Conservation and Society* 8, no. 3 (2010): 171–81.

23 Caffentzis, "The Future of 'The Commons,'" 32.

Common Property Resource Management Group (CPRNet) was founded by the World Bank as early as 1995 precisely for the purpose of integrating commons organizations "into the larger project of making the world safe for neoliberalism."[24]

Making the world safe for neoliberalism involves, among other things, the extensive governance, regulation, technification, and financialization of "nature" as "natural resources."[25] Meanwhile, constructions of "nature" are also pivotal to the commons. "Nature" is at the heart of the older, archetypal commons taking the form of "fisheries, forests and agrarian landscapes;"[26] central to "nature"-centered practices of traditional indigenous commoners; and pivotal to multiple new commons the world over.[27] Indeed, as noted above, anti-capitalist "new commons," for all their dynamic heterogeneity, converge in resistance to the "neoliberalization of nature."[28] "Nature" thus forms a materio-semiotic frontline, not only between the two competing versions of the commons identified by Caffentzis but of a global ontological struggle between anti-capitalist commons and neoliberalism's biopolitical/necropolitical agenda. Accordingly, "Nature," increasingly forced to "speak" as "environment,"[29] forms a decisive zone of contestation across which a life and death struggle over the meanings and forms of co-living and the status of life itself now takes place. (It is also, as will be noted later in this chapter, a construct widely deployed for the oppression and marginalization of humans (and non-humans) constructed as being non-rational by Eurocentric ontology and epistemology.)

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24 Ibid.

25 Sian Sullivan, "Green Capitalism, and the Cultural Poverty of Constructing Nature as Service-provider," *Radical Anthropology* 3 (2009): 18–27; Rupert Read and Molly Scott-Cato, "A Price for Everything? The Natural Capital Controversy," *Journal of Human Rights and the Environment* 5, no. 2 (2014): 153–67.

26 McCarthy, "Commons as Counterhegemonic Projects," 10.

27 Even a brief survey of the multitudinous forms of commoning discussed in Bollier and Helfrich, *Patterns of Commoning,* reveal the radical intimacy between the living order and commons communities.

28 McCarthy, "Commons as Counterhegemonic Projects," 11.

29 Luke, "On Environmentality," 59–63.

The totalizing ambition of neoliberalism's agenda is well captured by Luke's Foucauldian analysis of the Worldwatch Institute,[30] which emerges as a particularly salient example of the ambivalence of "progressive" narratives such as (in Luke's case) environmentalism and (in the World Bank example above) the commons.

Luke records that in a Worldwatch Institute publication, Brown, Flavin, and Postel reject "a narrow economic view of the world"[31] and argue that "growth is confined by the parameters of the biosphere."[32] The Institute's aim, reflected in its publication, Luke writes, is to "meld ecology with economics to infuse environmental studies with economic instrumental rationality and defuse economics with ecological systems reasoning."[33] While the ostensible aim of this double-headed strategy is apparently to ensure that economic growth cannot be decoupled from its substrate in natural systems and resources, it ultimately articulates a strategy expressing the WorldWatch Institute's "vision of geo-power and eco-knowledge as the instrumental rationality of resource managerialism working on a global scale."[34] In this process, "Nature" is reduced to a cybernetic system of four planetary biophysical systems supplying the global resources for the human population and translated into technical data for the management and capture of life itself as an object of ecological hyper-control.

The ambivalence of this strategy is both striking and familiar. As De Lucia has pointed out, when environmental interventions are read through the lens of Foucauldian biopolitics, even ecologically-driven critiques become legible as "a new set of normalizing strategies extending the scope of biopolitical technologies of power from human populations to the entire natural

30 Ibid., 71–80.
31 Ibid., 71.
32 Ibid.
33 Ibid., 72–73.
34 Ibid., 73.

world."[35] Of course, control of population and environment has long been interlinked. As Rutherford puts it, "the definition and administration of populations simultaneously requires the constitution and management of the environment in which those populations exist and upon which they depend."[36] It is this bottom line that explains the central focus of both pro- and anti-capitalist commons on "nature," and why "the environment" has become the core fulcrum point of ontological — and ontic — struggles.

Luke suggests that the Worldwatch writers are engaged in nothing less than a struggle to shift "the authorizing legitimacy of truth claims used in policy analysis away from economic terms to ecological terms […] [thereby] working to reframe the power/knowledge systems of advanced capitalist societies."[37] In this light, the neoliberal deployment of the commons, and its related recruitment and regulatory disciplining of communities and indigenous practices as modes of neoliberal governance, are entirely predictable.

The struggle between neoliberalism (with its deployment of pro-capitalist commons) and the anti-capitalist commons movement centers — in the final analysis — on the present and future of life on the planet. On the one hand, a global control system made up of a complex assemblage of actors, regulatory mechanisms and calculative market structures marshals and reduces life to informatics — to privatized, propertized, financialized, market-friendly processes and products — deploying ecological mechanisms of managerialism. On the other hand, all over the planet, human commoners of multiple kinds explicitly resist such logics, urgently seeking to express a radically

35 Vito De Lucia, "Beyond Anthropocentrism and Ecocentrism: A Biopolitical Reading of Environmental Law," *Journal of Human Rights and the Environment* 8, no. 2 (2017): 181–202, at 194.

36 Paul Rutherford, "The Entry of Life into History," in *Discourses of the Environment,* ed. Eric Darier (London: Blackwell Publishers, 1999) 37–62, at 45, cited in De Lucia, "Beyond Anthropocentrism and Ecocentrism," 194.

37 Luke, "On Environmentality," 74.

different kind of ontology and to reject the neoliberalization of nature.[38]

Emphasizing the "intrinsic value" of "nature" is thus a familiar theme in commons scholarship, though it is unclear how many commons scholars pay attention to the instability of nature as a referent[39] — or to its historical, oppressive deployments as a system of marginalization. Notwithstanding the instability of "nature" as a referent, one thing seems clear: the reduction of "nature" to spaces of acquisition, capitalist accumulation, and aggressive eco-managerialism as "environment" fully reflects the "environing" (encircling and controlling)[40] governance strategies identified by Luke as central expressions of eco-knowledge and geo-power.[41] Neoliberal eco-governmentality expresses

> the continuous attempt to reinvent the forces of Nature in the economic exploitation of advanced technologies linking structures in Nature to the rational management of its energies as geo-power, [which] is an ongoing supplement to the disciplinary construction of various modes of bio-power in promoting the growth [and control] of human populations.[42]

Such critiques resonate well with Caffentzis's analysis of the subversion of commons in the service of making the world secure for the neoliberal order. The sheer scale of ambition intrinsic to neoliberal eco-governmentality, and the totality of what is put at stake for lively systems and for human populations means

38 McCarthy, "Commons as Counterhegemonic Projects," 11.

39 "Nature" has an inherent semiotic instability for human beings. As Luke puts it, "different human beings will observe [Nature's] patterns, choosing to accentuate some while deciding at the same time to ignore others:" because of this, "Nature's meanings will always be multiple and unfixed:' Luke, "On Environmentality," 58.

40 Ibid., 63–65.

41 Ibid., 57.

42 Ibid., 58.

that it is now urgently necessary, with Escobar, to position anti-capitalist commons as sites and formations of a vibrant ontological politics[43] lined up against the ontological imperialism of an equally political neoliberalism.

3. Commons and Commoning as Ontological Politics

Escobar, primarily an anti-globalization social-movements scholar, argues that for commoners "the defense of territory, life and the commons are one and the same."[44] He addresses the "ontological dimension of commoning," arguing that "whereas the occupation of territories implies economic, technological, cultural, ecological and often armed aspects, its most fundamental dimension is ontological:"[45] ontological occupation spawns "*ontological struggles.*"[46] These are struggles, as Escobar frames them, to maintain "multiple worlds" against the "One World World" imposed by the neoliberal market order.[47] Escobar imagines the commons in their anti-capitalist forms pitted against the neoliberal colonization of life-worlds. This is the commons and commoning as ontological struggle against "the merciless world of the global 10 percent, foisted upon the 90 percent and the natural world with a seemingly ever-increasing degree of virulence and cynicism."[48]

Weber, like Escobar, turns towards the question of commons ontology. Weber argues that the structure of reality itself — even the perception that yields it to the human being's gaze — is a commons[49] — and that the crisis signalled by the Anthropocene provides an opportunity to re-conceive of the "relationship be-

43 Escobar, "Commons in the Pluriverse."
44 Ibid., 352.
45 Ibid.
46 Ibid., 353. Emphasis original.
47 Ibid., 348.
48 Ibid., at 355–56.
49 Andreas Weber, "Reality as Commons: A Poetics of Participation for the Anthropocene," in *Patterns of Commoning,* eds. Bollier and Helfrich, 369–91.

tween humanity and nature" and to "reimagine our ontological condition."[50] Weber's response to this opportunity is to evoke what he calls "*Enlivenment*" as a post-Enlightenment (or "Enlightenment II") "ontology of aliveness, of coming to life, that is at once physical and intangible, and scientific and spiritual."[51] Weber argues, indeed, that the perspective of the commons is now indispensable to understanding "the relationship of humans to reality."[52] Weber, like Escobar, also assumes the anti-capitalist strain of commons theory, praxis, and activism. He also embraces non-dualistic indigenous cosmovisions and the need to reject the ontological colonization enacted by Enlightenment reductionism.

Taken together, the commons ontological framework offered by Weber and Escobar offers a corrective to the instrumentalist paradigm of "nature." The complexity-sensitive and pluriversal energies at the heart of the ontology intimated by Escobar and Weber, when read together, open a seam for depth-exploration of epistemic and ontological resistance to hegemonic neoliberal coloniality and the tyranny of the knowing "centre."[53]

While the instability of "nature" as a referent persists, it is clear that neither of these writers make the assumption that "nature" is intrinsically benign. The commons of "nature" remains full of tensions — with implications for the practice of ontological politics as process: Weber, for example, in his long essay *Enlivenment,* makes the point that his ontological proposal means that "[t]o be really alive means to be embedded in a mess that must constantly be negotiated."[54] Weber argues that binaries are

50 Ibid., 370.

51 Ibid., 372. See also Andreas Weber, *Enlivenment: Towards a Fundamental Shift in the Concepts of Nature, Culture and Politics* (Berlin: Heinrich Boll Stiftung, 2013).

52 Weber, "Reality as Commons," 371.

53 For particularly rich exploration of a distinctly post-Kantian de-centering of epistemology, see Lorraine Code, *Ecological Thinking: The Politics of Epistemic Location* (Oxford: Oxford University Press, 2006).

54 Weber, *Enlivenment,* 62.

to be replaced by an epistemic practice of embracing paradox and living with oppositionalities in a constant, flexible negotiation — an embrace of paradox central and necessary to the "poetic materialism" he proposes.[55]

Weber's account points the way towards an ontological politics unafraid of internal tension, complexity, paradox, and ambiguity. Does poetic materialism, however, go far enough? Might New Materialist onto-epistemology add something valuable the mix?

4. Encountering "Poetic Materialism" — An Existential Ecological Ontology

It seems important to address Weber's work because it offers a materialist ontology for the commons, and, at points, explicitly addresses the commons as praxis. His work invites engagement, therefore, in a chapter offering New Materialist insights that might contribute distinctive threads to the development of a more radical commons ontology.

In reading Weber — and the New Materialist authors I later discuss — I have chosen to keep in mind Bennett's argument that vocabulary is a precursor to, and pivotal for, the level of "discernment" intrinsic to appreciating the "active powers" of the more-than-human.[56] How, then, does Weber's vocabulary position the more-than-human for the commons? And what does his choice of language imply concerning the ontology of poetic materialism?

Weber argues, in *Enlivenment,* that at the heart of the commons are "diverse interests negotiating mutually acceptable outcomes, and individual actors coming to respectful terms with their habitat. This concept transcends the idea of a mere exchange of resources and covers many areas of human–human

55 Weber, *Enlivenment,* ch. 7, "Basic Principles of Enlivenment: Working with Paradoxes."

56 Jane Bennett, *Vibrant Matter: A Political Ecology of Things* (Durham: Duke University Press, 2010), ix. Emphasis added.

and human–nature interactions."[57] Weber's language here explicitly foregrounds "human-human" and "human-nature" interactions. It is immediately noticeable — and interesting — that there is no explicit equivalence given here to "nature-human" and "nature-nature" interactions. The linguistic formulation here seems potentially to foreground the human in a way that sits at nuanced variance with Weber's broader ontological framework, which openly embraces the meaningful and meaning-generative capacities of "other animate beings, which, after all share the same capacities [as humans] for embodied experiences and 'worldmaking.'"[58] Indeed, Weber's book *Enlivenment* explicitly places "other animate beings" alongside the human and explicitly centers his ontology on *life/zoē* — even proposing a new designation of the Anthropocene as the "*Zoocene*."[59]

Weber offers what he calls a "wild naturalism" based on

> the idea of nature as an unfolding process of ever-growing freedom and creativity paradoxically linked to material and embodied processes. The biosphere is alive in the sense that it does not only obey the rules of deterministic or stochastic interactions of particles, molecules, atoms, fields and waves. The biosphere is also very much about producing agency, expression, and meaning.[60]

Weber's later works further develop this wild naturalism. Weber proposes a "poetic materialism," or "erotic ecology," primarily establishing his ontology by foregrounding embodied affective relationality, and by highlighting the interiority and "desire" of material entities for each other in terms reminiscent of panpsychism. In fact, Weber's panpsychic resonance seems close — in some respects — to the panpsychism presented by

57 Weber, *Enlivenment,* 67.
58 Ibid., 22.
59 Ibid., 67. The zoocene emphasises "life in its felt sense" and includes "the whole animate earth" (ibid).
60 Ibid.

Mathews in *For Love of Matter* — as "a subjectival dimension, to materiality."[61]

This subjectival dimension to materiality, in Weber's philosophy, is activated as an ethical and creative force through the phenomenon of "feeling":

> Emotional experience is not alien to the conception of an ecological commons but central to it. In an ethics of mutual ecological transformation, feeling is a central part. As inwardness is the necessary way bodies experience themselves, feeling is also a crucial component of an ecological ethics.[62]

Weber sees ecological commons as complex, rhizomatic, situated, sites of interactivity. These are characterized — as is his conception of "nature" more generally — by the "mutual transformation" of embodied agents. Weber argues that "Agency is always inscribed within a living system of other animate forces, each of which is both sovereign and interdependent at the same time"[63] — and that in a commons, humans are not "ruler[s]" but "attentive subject[s] in a network of relationships."[64] Every commons is, therefore, "a material and informal network of living, incarnate and meaningful connections, which constantly changes as it mutates and evolves —"[65] "a community (between humans and/or nonhuman agents)."[66]

Weber argues that the commons, because it does not conceptually detach commoners from the space of commoning, dissolves the nature/culture divide because it cancels the divide between the social and the ecological.[67] While it might be ob-

61 Freya Mathews, *For Love of Matter: A Contemporary Panpsychism* (Albany: State University of New York, 2003), 8.
62 Andreas Weber, *The Biology of Wonder: Aliveness, Feeling and the Metamorphosis of Science* (Gabriola Island: New Society Publishers, 2016), 802.
63 Ibid., 800.
64 Ibid.
65 Ibid.
66 Ibid., 795.
67 Ibid., 798–99.

jected that it would take more argument than this satisfactorily to establish that seeing the commons in this way dissolves the socio-ecological divide, it is clear that, in an important and central sense, Weber imagines commoning to be an active, affective community between humans and/or non-human agents.

This is all very promising.

However, at the same time, there is an elusive tenor of lingering human centrality in Weber's writing. Reading him more closely, this tenor seems to emerge from the "poetic" expression of his erotic ecological materialism — a communicative choice producing a subtle linguistic traction towards the centrality of human experience. Access to the "innermost core of aliveness" of matter, Weber argues, is "only possible through being involved in experiences and creative expression," and commoning is thus described as an eco-ethical set of practices, a "culture" facilitating the "self-realization of Homo sapiens […] [as] the species-specific realization of our own particular embodiment of being alive within a common system of other living subjects."[68] It is important, here, to bear in mind that a central component of Weber's passionate eco-philosophical project is precisely to provoke an awakening to the "aliveness" revealed by "new biology" — and that his choice of poetic communication is key to that. It is also important to acknowledge that there is indeed a potent onto-political role for poetic communication and consciousness-raising. Nevertheless, it seems to me that there is a distinction that can and should be drawn between offering (an inescapably human) existential perspective on the lively inter-species entanglement of a commons, and positioning the commons as a vehicle for the "self-realization of Homo sapiens." The poetic formulations that Weber uses, moreover, seem to convey a subtle, lingering primacy of the human at odds with elements of his ontology. It seems that the "we" of the subtly central humanity is the almost inevitable offspring of the "I"-centered phenomenological poetics of Weber's communicative methodology.

68 Ibid., 799.

The flickeringly foregrounded human, to me at least, signals a subtle tension between the poetic and the analytical in Weber's writing. He is deliberately intimately present to the reader in his texts as a first person, emotional narrator. His poetic, experientially "felt" ontology is both discovered and shared with his readers through Whiteheadean shifts of perception — existential moments of personal transformative awareness: Weber's writing foregrounds the centrality of his own subjective human account of how he "feels" the relational and "inner" aliveness of his ontological poem-scape.

Clearly, such first-person intimacy is a powerful rhetorical strategy for awakening the sensibility of the reader to the biopoetic materialist ontology that Weber seeks to establish as the ground of his "erotic" ecological ethics. Nonetheless, this first-person "I" — and its apparent drift into a second-person collective human "we" — has the effect, linguistically, of rendering the (agentic) non-human the "other" in an "I-Thou" relation for which the human "I' retains a subtle priority at inconsistent and muted odds with Weber's broader ontological intuitions.

Such priority is also implicated in some of Weber's more general exhortations to transformative thinking. For example, his statement in *The Biology of Wonder* that "We must preserve living beings for life's sake, in order for life to be able to self-organize, to unfold, to experience itself,"[69] is a statement whose vocabulary and formulation makes materiality's self-organizing capacities and "self"-"experience" dependent on a prior exercise of agency by an apparently human "we." The language installs this "we" as a human collective whose agency must act to preserve living beings in order for life to be able to self-organize, to unfold, to experience itself. In context, Weber is addressing the environmental destruction wrought by the deadening objectification of traditional Western thought and science — but even so — this formulation of his point elevates human agency, almost rendering it a material precondition for "nature's" self-organizational capacities to function. This formulation hints

69 Ibid., 58–59.

at a kind of agentic overreach that ironically, echoes (without sharing other suppositions of) the agentic assumptions driving climate change and environmental destructiveness.

If, in the final analysis, Weber's commons is a form of situated, embodied relationality establishing an eco-ethical set of practices serving the "self-realization of Homo sapiens,"[70] it is little wonder that he defines a commons in terms of "human-human and human-nature interactions." Nevertheless, Weber's poetic existentialism breathes into being an ontology that, in most respects embraces an entangled meshwork of lively, agentic, human–non-human relations. He thus reaches (albeit inconsistently perhaps) beyond traditional conceptions of the commons in a welcome departure from the kinds of complexly constituted anthropocentrism haunting much of commons scholarship.

If we return to the definition offered by Helfrich and Haas,[71] we can clearly see the centrality of the social to the commons. Helfrich and Haas, recall, emphasize that "Commons are not the resources themselves but the set of relationships that are forged among individuals and a resource and individuals and each other."[72] There are two things of note here: first, the "social" at the heart of the commons is clearly a human "social." Secondly, the relationships at the heart of the commons, as formulated here, map onto Weber's "human-human and human-nature interactions." Unlike Weber's conception, however, these relationships are more reductively imagined, and closer to the subject-object assumptions of Cartesianism. The "individual" maps onto the "human," while "resource" maps onto "'nature'/non-human source of value, etc." — but the ontology implied by the language is the precisely the ontology that Weber seeks to replace with his poetic materialism.

The definition offered by Helfrich and Haas exposes the predominant operative conception of the commons for which commoners are human beings and for which human social relation-

70 Ibid., 799.
71 See n.4 above and related text.
72 Helfrich and Haas, "The Commons," 5.

ships lie at the center. Indeed, overall, it is difficult to read much commons scholarship without gaining the impression that there is in it a tension reflecting the possibility that anthropocentrism is simultaneously both rejected and re-installed: rejected at the overt surface, re-installed by the undertow of ontological assumptions — assumptions revealed by vocabulary.

This tension suggests the possibility that commons thinking — as yet — evinces a certain lack of theoretical settlement. Lack of settlement — in and of itself — is not a negative state of affairs, of course. It can be a sign of evolution and energy and can signal potential for future development. Commons and commoning are capacious enough to embrace a multitude of ontological visions. Escobar, for example, imagines "the pluriverse" — an excitingly rich figuration embracing numerous ways of living and seeing, numerous worlds that co-exist,[73] cross-fertilize, interweave, and co-negotiate. Moreover, the centrality of "relationality" to the commons — emphasized by so much commons scholarship — and so poetically by Weber — readily implies the importance of providing epistemic space for the ontological commitments of literally thousands of communities the world over, many of which already embrace consciously intimate engagements with lively "nature." Such epistemic space offers, in addition, a direct and important contrast with the systemic epistemic closure enacted by the neoliberal eco-governance order or — to borrow Escobar's language — by the "One world world."[74]

All that said, it seems productive to use the tensions and opportunities emerging from the possibility of subtle, internal contradictions in commons thinking as a space of indeterminacy, into which to offer some brief reflections concerning more-than-human commoners and the distinctive contribution of a "New Materialist" approach.

First, however, I want to position that reflection — briefly — in relation to what it is that the commons as ontological

73 Indeed, this is the title of Escobar's chapter: "Commons in the Pluriverse."
74 Ibid., 348.

politics is up against: is there a possibility that the situation in which onto-struggles now take place strengthens the appeal of a New Materialist theorization of more-than-human commons, commoning, and commoners?

5. The Urgency of Ontological Politics

To appreciate fully the decisive importance of commons as ontological politics, it seems important to locate reflection in the contemporary situation. This is, after all, the situation in which anti-capitalist commoning seeks to resist capitalist enclosures, appropriations and captures.

The contemporary era is often referred to as "Anthropocene," which is a widely deployed term for a "new age of man" in which the human species has become a geological, rather than just a biological, force.[75] The terminology is etymologically drawn from *anthrōpos* (man) and *kainos* (new) and was first popularized in 2002.[76] It is important to remember, however, that despite the notion that the "anthropos" of the Anthropocene is a species figuration, in reality, it is not.[77] Moreover, as Haraway has pointed out, the Anthropocene is intrinsically coupled with the scale of the "global," and the "global" is highly specific in its origins and development.[78] In reality, the Anthropocene reflects highly uneven historical processes of colonization[79] and ram-

75 Dipesh Chakrabarty, "The Climate of History: Four Theses," *Critical Inquiry* 35 (2009): 197–222.

76 It was first popularized by Crutzen: Paul J. Crutzen, "Geology of Mankind," *Nature* 415, no. 6867 (2002): 23.

77 Anna Grear, "Deconstructing Anthropos: A Critical Legal Reflection on 'Anthropocentric' Law and Anthropocene 'Humanity,'" *Law and Critique* 26, no. 3 (2015): 225–49.

78 AURA, "Donna Haraway, 'Anthropocene, Capitalocene, Chthulucene: Staying with the Trouble,' 5/9/14," *Vimeo,* June 8, 2014, https://vimeo.com/97663518, at 14.02. See Antony Anghie, *Imperialism, Sovereignty and the Making of International Law* (Cambridge: Cambridge University Press, 2005).

79 Andreas Malm and Alf Hornborg, "The Geology of Mankind? A Critique of the Anthropocene Narrative," *The Anthropocene Review* 1, no. 1 (2014): 62–69.

pant capitalist neo-coloniality.[80] So specific is the "global" folded into the Anthropocene that the "Anthropocene" is also identified by some as the "Capitalocene."[81]

I will use the term "Anthropocene-Capitalocene" to foreground the uneven origins and contemporary mal-distribution of Anthropocene climate and environmental fallouts; the fundamentally colonial capitalist imperatives driving the continuing structural dominance of the fossil-fuel economy;[82] extensive, and continuing, corporate enclosures in the Global South;[83] and the pervasive and expanding commodification and technification of "nature."[84]

So much is at stake. Neoliberalism is now the dominant engine of the Anthropocene-Capitalocene: it enacts violence extensively visited upon communities, individuals, places, animals, ecosystems, and other lively materialities either in the way of or (alternatively) in the sights of, neoliberal agendas. The colonizing of multiple life-worlds at stake in neoliberal accumulation reiterates, and builds on, earlier patterns of ontological (and epistemological) violence[85] underlying Eurocentric power

80 Max Koch, *Capitalism and Climate Change: Theoretical Discussion, Historical Development and Policy Responses* (Basingstoke: Palgrave Macmillan, 2012).

81 This proposal is offered, among others, by Haraway, in AURA, "Donna Haraway, 'Anthropocene, Capitalocene, Chthulucene: Staying with the Trouble,' 5/9/14"; Andreas Malm, *Fossil Capital: The Rise of Steam Power and the Roots of Global Warming* (London: Verso, 2016); Jason W. Moore, ed., *Anthropocene or Capitalocene? Nature, History, and the Crisis of Capitalism and the Crisis of Capitalism* (Oakland: PM Press, 2016).

82 Koch, *Capitalism and Climate Change*; Jerome Dangerman and Hans J. Schellnhuber, "Energy Systems Transformation," *PNAS* 110, no.7 (2013): E549–E558.

83 Corson and McDonald, "Enclosing the Global Commons."

84 Gernot Bohme, *Invasive Technification: Critical Essays in the Philosophy of Technology,* trans. Cameron Shingleton (London and New York: Bloomsbury, 2012).

85 Graham Huggan and Helen Tiffin, "Green Postcolonialism," *Interventions: International Journal of Postcolonial Studies* 9, no. 1 (2007): 1–11.

distributions of the international legal order.[86] More fundamentally, neoliberal accumulative rationalism ultimately relies — as Weber and Escobar both either state or imply — upon a central, binary set of severed ontological relations between "humans" and "nature," between "subject" and "object". Ontology is at the heart of the current sets of crises. The well-rehearsed, uneven, and entirely predictable mal-distributions of life and death characterizing the Anthropocene-Capitalocene thus draw upon the same fundamental ontological splits as have long operated in the service of Eurocentric, masculinist, colonizing power.[87] In the Anthropocene-Capitalocene, neoliberalism's biopolitical/necropolitical logics are driving a potential terminus — including for human beings. As Stengers puts it in *In Catastrophic Times,*[88] human beings face, potentially "the death of what we have called a civilization [— and, she reminds us —] there are many manners of dying, some being more ugly than others."[89] Even death itself — the great leveler — is unevenly distributed, whether as terminus or process.

Neoliberalism actively exploits the notion that there is no other solution to the enormity of the problems confronting humanity — and, accordingly, constructs the illusion that there is no alternative to neoliberal managerial eco-governance on a planetary scale. Indeed, Stengers argues that even "radical uncertainty with regard to the catastrophes that [the current crisis] is likely to produce […] won't make the capitalist machine hesitate, because it is incapable of hesitating: it can't do anything other than define every situation as a source of profit."[90] The logics of consumptive capitalism will continue to insist — in

86 Dipesh Chakrabarty, *Provincialising Europe* (Princeton: Princeton University Press, 2007); Anghie, *Imperialism, Sovereignty and the Making of International Law,* 67.

87 Sam Adelman, "Epistemologies of Mastery," in *Research Handbook on Human Rights and the Environment,* eds. Anna Grear and Louise Kotzé (Cheltenham: Edward Elgar Publishing, 2015), 9–27.

88 Isabelle Stengers, *Catastrophic Times: Resisting the Coming Barbarism* (Luneburg: Open Humanities Press/meson press, 2015).

89 Ibid., 10.

90 Ibid., 9.

short — that "the techno-industrial capitalist path is the only one that is viable"[91] in the face of the Anthropocene-Capitalocene planetary crisis.

The ascendancy of such logic is already evident in the growing popularity of ethically dubious[92] commitments to geo-engineering as a way of techno-fixing the climate, irrespective of the risks involved.[93] Such hubristic strategies amount to a form of risky gambling with the futures of millions,[94] and reveal the vulnerability of "humanity in its entirety [to being] taken hostage" by capitalist profit making "solutions" for the otherwise (supposedly) insoluble: "In this way, an 'infernal alternative' [is] fabricated at the planetary scale: either it's us, your saviours, or it's the end of the world."[95]

Against such horizons, it is all the more urgent for commoning to offer multiple forms of resistance. The dangers for the commons, however, are pervasive: panoptic governance and neoliberal eco-managerialism already subvert, as we have seen, some commons for pro-capitalist ends, and in the final analysis, there is absolutely nothing to guarantee that any commons will be, or remain, immune from capture. Moreover,

> [t]here isn't the slightest guarantee that we will be able to overcome the hold that capitalism has over us (and in this instance, what some have proposed calling "capitalocene," and not anthropocene, will be a geological epoch that is extremely short). Nor do we know how, in the best of cases, we might live in the ruins that it will leave us: the window of

91 Ibid.

92 Henry Shue, "Climate Dreaming: Negative Emissions, Risk Transfer, and Irreversibility," *Journal of Human Rights and the Environment* 8, no. 2 (2017): 203–26.

93 Sam Adelman, "Geoengineering: Rights, Risks and Ethics," *Journal of Human Rights and the Environment* 8, no. 1 (2017): 119–38.

94 Ibid.; Shue, "Climate Dreaming."

95 Stengers, *Catastrophic Times,* 9.

> opportunity in which, on paper, the measures to take were reasonably clear, is in the process of closing.[96]

If the Anthropocene-Capitalocene leaves a window of opportunity in the process of closing, ontology as politics could not be more decisively important or timely — and commoning has never been more urgent as a dynamic of ontological resistance. What, then, might New Materialism offer to commons thought in the face of such struggles? And how does New Materialism offer agentic significance to the more-than-human? And why might that matter in the calculus of resistance to neoliberalism's voracious colonization of lifeworlds?

6. New Materialist Commoning

For New Materialist thinkers, all matter — including inorganic matter — and the artefactual — is agentic in the broad sense that there is, as Bennett puts it, a "capacity of things — edibles, commodities, storms, metals — not only to impede or block the will and designs of humans but also to act as quasi agents or forces with trajectories, propensities or tendencies of their own."[97] Bennett is explicit, moreover, about dissipating the organic/inorganic binary.[98] Her ontological proposal aims to challenge the "received concepts of agency, action, and freedom sometimes to the breaking point" and to "sketch a style of political analysis that can better account for the contributions of nonhuman actants."[99] Language is central to this task, and Bennett's work can, in part, be characterized as an exercise in strategic epistemic politics: She argues that her focus is on "the task of developing a vocabulary and a syntax for, and *thus a better discernment of,* the active powers issuing from non-subjects."[100]

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96 Ibid.
97 Bennett, *Vibrant Matter,* ix.
98 Ibid., x; xviii.
99 Ibid., x.
100 Ibid., ix (emphasis added).

We have seen how challenging it is to find this vocabulary and syntax — and I have suggested that Weber's communicative methodology presents challenges to the ontological consistency of poetic materialism. Bennett's search for vocabulary, I suggest, does not present the same challenges for her — and her onto-epistemology does not adopt, or express itself through, an existentialist frame.

The ethical task at the heart of Bennett's proposal is "to cultivate the ability to discern nonhuman vitality, to become perceptually open to it"[101] — which on the face of it, chimes closely with Weber's ambition. For Bennett, the active powers issuing from non-subjects express the liveliness intrinsic to materiality that Bennett calls "thing-power," which is "an alternative to the object as a way of encountering the nonhuman world."[102] Matter is *materialization* and "things" have a productivity of their own. Being animate is, on this view, a matter of degree, and inorganic matter displays powers of self-organization and is "much more variable and creative than we ever imagined."[103]

For Bennett, however, matter's powers of self-organization do not rely on humans preserving "nature" or playing any other facilitative role. She uses the example of metal to communicate the liveliness of the inorganic,[104] drawing, in part, on Deleuze

101 Ibid., 14.

102 Ibid., xvii.

103 Ibid., 7.

104 Ibid., ch. 4 "A Life of Metal." Metal has its own "protean activeness" (59). "The crystal grains of, say, iron come in a large variety of sizes and shapes, depending on 'the space-filling pressures of their neighbours.' Though the atoms within each individual grain are 'arranged with regular array on a space lattice,' there are also 'imperfections in the array,' most notably the presence of loose atoms at the 'interfaces' of grains. These atoms 'belong' to none of the grains, and they render the boundaries of each grain porous and quivering: a grain of iron is not 'some kind of an enveloped entity,' as is 'a grain of wheat.' This means that the crystalline structure of metal is full of holes or 'intercrystalline spaces.' These 'vacancies' can be 'as important as the atom' in determining properties of a particular metal" (58–59), citing Cyril S. Smith, *A History of Metallography* (Chicago: University of Chicago Press, 1960) (original citations omitted). "Manuel De Landa points to another instance of a life of metal in the 'complex dynamics of

and Guattari who refer to "metal as the exemplar of vital materiality," a material exhibiting "the prodigious idea of Nonorganic Life."[105] Bennett suggests that metallurgists, artisans, mechanics, woodworkers, builders, cooks, cleaners, "(and anyone else intimate with things) *encounter* a creative materiality with incipient tendencies and propensities, which are variably enacted depending on the other forces, affects, or bodies with which they come into close contact."[106] Matter, as she puts it, drawing on a quotation from Massumi, is a "pressing crowd of incipiencies and tendencies."[107]

It is not necessarily easy for humans in the everydayness of ordinary embodied life to see these forms of liveliness, but Bennett argues that what we humans take to be objects only seem to be static because their "becoming proceeds at a speed or a level below the threshold of human discernment."[108] Bennett accepts that humans tend to distinguish things from persons, but points

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spreading cracks' […] the travel of which is "not deterministic but expressive of an emergent causality, whereby grains respond on the spot and in real time to the idiosyncratic movements of their neighbors, and then to their neighbors' response to their response, and so on, in feedback spirals" (59), citing Manuel De Landa, "Uniformity and Variability: An Essay in the Philosophy of Matter," paper presented at the "Doors of Perception 3" Conference, Netherlands Design Institute, Amsterdam, November 7–11, 1995.

105 Ibid., 55, citing Gilles Deleuze and Felix Guattari, *A Thousand Plateaus: Capitalism and Schizophrenia,* trans. Brian Massumi (Minneapolis: University of Minnesota Press, 1987), 411. Bennett argues that *A Thousand Plateaus* "is full of quickening, effervescent proto- and no-bodies […] which are best described, in Spinozist terms as 'a set of speeds and slownesses between unformed particles [with] […] the individuality of a day, a season, a year, a life'" (55), citing Deleuze and Guattari, *A Thousand Plateaus,* 262.

106 Ibid., 56, emphasis added.

107 Ibid., 57, citing Alan Latham and Derek P. McCormick, "Moving Cities: Rethinking the Materialities of Urban Geographies," *Progress in Human Geography* 28, no. 6 (2004): 701–24, at 701, where the authors, at 705, cite Massumi. (In original context, Massumi is speaking of the body's combination of actual and virtual: Brian Massumi, *Parables for the Virtual: Movement, Affect, Sensation* [London and Durham: Duke University Press, 2002], 30).

108 Bennett, *Vibrant Matter,* 58.

out that "the sort of world we live in makes it constantly possible for these two sets of kinds to exchange properties."[109] The liveliness here, however, is neither "transpersonal or intersubjective but impersonal, an affect intrinsic to forms that cannot be imagined (even ideally) as persons."[110] This embrace of the impersonal nature of material liveliness seems to be an important potential distinction between Bennett's ontology and that of Weber. Bennett's account of lively matter is also not strictly speaking *zoocentric* — even in an expanded sense that moves beyond a focus on the animal to something approaching a life force. Nor does Bennett posit an eco-romantic "I-Thou" relation with "nature" or with "natural forces." Her thought arguably takes materialism into register that eschews biocentrism as well as anthropocentrism.[111] Thus, while Bennett shares Weber's passion for awakening a perceptual responsiveness to non-human material agency, her mode of communication and her ontological framing seem more insistently to emphasize the agentic liveliness of non-human matter in a way that foregrounds the idea that "[t]he locus of agency" is "*always* a human-nonhuman working group"[112] — and this would be the case, presumably, even when the frame of attention is placed on human beings operating a "human-human" or a "human-nature" relationship. Inorganic and artefactual material actants are thus necessarily fully significant for "why collectives involving humans take the form they do."[113]

The kind of "distributed agency" that Bennett traces reflects the capacity to affect or to be affected that is typical of all matter. And this affect forms a central focus of New Materialist analyses,

109 Ibid., 10.

110 Ibid., 61.

111 Andreas Philippopoulos-Mihalopoulos, "Actors or Spectators? Vulnerability and Critical Environmental Law," in *Thought, Law, Rights and Action in the Age of Environmental Crisis,* eds. Anna Grear and Evadne Grant (Cheltenham: Edward Elgar, 2015) 46–75; De Lucia, "Beyond Anthropocentrism and Ecocentrism."

112 Ibid., xvii, emphasis added.

113 Levi R. Bryant, *The Democracy of Objects* (Ann Arbor: New Humanities Press, 2011), 23.

more broadly.[114] New Materialism foregrounds impersonal material processes of production that emerge as "assemblages" "in a kind of chaotic network of habitual and non-habitual connections, always in flux, always reassembling in different ways."[115] The centrality of the assemblage to New Materialist analysis links ontology to politics in a way that is particularly salient for the complexities of Anthropocene-Capitalocene planetary predicament. Since "there is nothing to prevent a relation conventionally thought of as 'micro' (e.g., a local transaction) and a 'macro' relation (e.g., a nation-state or a climate pattern) [being] drawn into an assemblage by an affective flow," New Materialist analysis is wide-ranging in focus. The affects of macro-structural projects (such as the international economy) can be drawn together with critical attention to "micro-powers of governmentality," and with a whole constellation of actants; biological urges; movements of herds or flocks; transits of toxins, viruses, nutrients, water, air; the physical infrastructure of a power supply, the movement of electrons, patterns of discourse, and so much more besides.

One particularly useful contribution to New Materialist thought for the Anthropocene-Capitalocene is offered by Alaimo in *Bodily Natures: Science, Environment and the Material Self*.[116] Alaimo's work foregrounds embodiment, materiality and interconnection (as Weber's does), but takes corporeal entanglements into an urgent political encounter with toxicity. Alaimo does not offer an eco-romantic theorization, though she does invoke the convergence of "concern and wonder" (terms Weber would embrace) that emerges when "the context for ethics becomes not merely social but material — the emergent,

114 Nick J. Fox and Pam Alldred, "New Materialist Social Inquiry: Designs, Methods and the Research-assemblage," *International Journal of Social Research Methodology* 18, no. 4 (2015): 399–414, at 401, citing Gilles Deleuze, *Spinoza: Practical Philosophy* (San Francisco: City Lights, 1988), 101.

115 Ibid., citing Annie Potts, "Deleuze on Viagra (or, What Can a Viagra-body Do?)," *Body and Society* 10 (2004): 17–36, at 19.

116 Stacy Alaimo, *Bodily Natures: Science, Environment and the Material Self* (Bloomington and Indianapolis: Indiana University Press, 2010).

ultimately unmappable landscapes of interacting biological, climatic, economic and political forces."[117] These unmappable landscapes are encountered in Alaimo's work through "trans-corporeality", a mode of encounter and analysis which, she argues, enables a "thinking across bodies" and a "movement across bodies" that "opens up a mobile space that acknowledges the often unpredictable and unwanted actions of human bodies, nonhuman creatures, ecological systems, chemical agents, and other actors".[118] Alaimo's emphasis on the "trans-" also demands "more capacious epistemologies" and, she suggests, "allows us to forge ethical and political positions that can contend with […] late twentieth- and early twenty-first-century realities."[119]

Importantly, trans-corporeality brings corporeal theories, science studies and environmental theories into a complexly productive engagement, responding to the need for "modes of analysis that travel through the entangled territories of material and discursive, natural and cultural, biological and textual."[120] Analysis itself, in other words, is a trans-corporeal assemblage — and Alaimo is careful to acknowledge that the deep realities of trans-corporeality are already being registered in a wide range of intellectual, cultural, material spaces, in scholarship, activisms, art practices, and broader socio-cultural practices.

Alaimo rightly foregrounds the well-founded feminist suspicion of biology and of "nature" as constructs that have long been used to privilege Eurocentric, masculinist rationalism and concomitantly to denigrate women, indigenous peoples and all other humans (and non-humans) constructed as being less than fully rational. This critique of biology and "nature" is critical, I suggest, for thinking about onto-political alternatives — not least because the distributions of privilege and marginalization marking them are fundamental to the Anthropocene-Capitalo-

117 Ibid., 2.
118 Ibid.
119 Ibid.
120 Ibid., 3.

cene. There is, in short, a significant continuity between science, biology, "nature," and a highly unjust, gendered, raced, politics of juridical "neutrality" that needs overtly calling out. Alaimo signals an acutely injustice-sensitive aspect of feminist New Materialist work when she argues that "Perhaps the only way to truly oust the twin ghosts of biology and nature is, paradoxically, to endow them with flesh, to allow them to materialize more fully, and to attend to their precise materializations."[121]

Many of these materializations in the Anthropocene-Capitalocene necessitate an explicit focus on risk and toxicity. Alaimo places a strong epistemological and political emphasis on the trans-corporeal transit of toxins, a transit that is intimately local and simultaneously entangled with regulatory negligence, environmental degradation, and global patterns of social injustice.[122] Such trans-corporeal vectors necessitate an epistemological expansion, not just for tracing the ways in which "trans-corporeality often ruptures ordinary knowledge practices," but also for embracing "particular moments of confusion and contestation that occur when individuals and collectives must contend not only with the materiality of their very selves but with the often invisibly hazardous landscapes of risk society." [123]

This necessity for an epistemological shift reflects an immersive entanglement within "incalculable, interconnected material agencies that erode even our most sophisticated modes of understanding."[124] Citing Beck, Alaimo argues that, "Understanding the risks requires the 'sensory organs' of science — theories, experiments, measuring instruments — in order to become visible or interpretable as hazards at all."[125] Given that, as members of the risk society, we cannot "know" without such sensory organs, scientific knowledge becomes a pre-requisite for "survey[ing] the landscape of the self."[126] One implication,

121 Ibid., 6.
122 Ibid., 15.
123 Ibid., 17.
124 Ibid.
125 Ibid., 19.
126 Ibid.

therefore, of Alaimo's work is that an account of the self for the Anthropocene-Capitalocene must go beyond an existential account of human ontological entanglement with "nature," and must explicitly highlight the entanglements of the self in the structural assemblages of a trans-corporeal materiality that is emphatically marked by toxic risk. The risks at stake here also require understanding materiality itself as agential within a frame that brings into view the immense complexity of flows and forces at work: economic, political, juridical, cultural, climatic, spatial, chemical, viral, molecular, racial, sexual, extractive, appropriative, emissive, calculative, regulatory, and so on. And, as result, as Alaimo rightly points out, trans-corporeality "demands more responsible, less confident epistemologies."[127] It also means that "The self becomes unrecognizable in the material memoir […] because self-knowledge in risk society demands 'scientific' understandings of a vast, coextensive materiality."[128]

Alaimo's account positions a powerful, critically-informed onto-politics firmly within the complex materialities of the Anthropocene-Capitalocene, in a feminist New Materialist reflection richly fed by strands of critical theory, literatures, themes, and activisms that are not foregrounded by Weber's poetic materialism. Alaimo's important argument concerning the extension of science as a necessary sensory organ for the trans-corporeal risk society contextualizes, by implication, existential poetics, with a critical injustice-sensitive framing. Such a framing, I suggest, is a non-negotiable component of living against the global networks of historical and contemporary injustice typifying neoliberalism's appropriative colonization of lifeworlds.

It is clear that New Materialism radically de-centers the human. It focuses, in De Landa's words, on the "idea that matter has morphogenetic capacities of its own and does not need to be commanded into a generating form."[129] How then, might we

127 Ibid., 22.
128 Ibid., 24.
129 Rick Dolphijn and Iris van der Tuin, *New Materialism: Interviews & Cartographies* (Ann Arbor: Open Humanities Press, 2012), 43.

construct New Materialist entanglements and "relationalities" for the Anthropocene-Capitalocene with commoning in mind?

One insight that we might follow, one Weber would undoubtedly share and endorse, is the idea that "all bodies are kin in the sense of inextricably enmeshed in a dense network of relations."[130] Haraway, arguably, has offered most to this particular thread, both in her alternative figuration for the Anthropocene-Capitalocene — the "Chthulucene" — and, in her emphasis on "staying with the trouble" and her call to active "kin-making."[131] Several commons-sustaining insights emerge, in particular, from Haraway's chapter on "Tentacular Thinking" in *Staying with the Trouble.*[132]

Haraway is deeply attentive to the multiplicity of connections at stake in contemporary planetary dilemmas. Without denying the ultimate sense in which everything is ultimately entangled, she insists that "nothing is connected to everything; everything is connected to something," meaning that while everything may ultimately be connected to everything else, the "specificity and proximity of connections matters — *who we are bound up with and in what ways.*"[133] This question of who we are bound up with in what ways, it seems to me, lies at the heart of commoning, and is rich with implication for the kind of embodied, situated awareness at the heart of Weber's commons ontology. In a commons, we could say, it matters how humans and other lively non-human commoners of all kinds — organic and inorganic — are understood to be bound up with each other, and in what ways. It matters whether human-non-human distributed agency/affect is made visible or invisible by the onto-epistemic framing in play. It matters how the incipiencies and propensities

130 Bennett, *Vibrant Matter,* 13.

131 Donna J. Haraway, "Tentacular Thinking: Anthropocene, Capitalocene, Chthulucene," in *Staying with the Trouble: Making Kin in the Chthulucene* (Durham: Duke University Press, 2016) 30–57.

132 Ibid.

133 Ibid., 31, n.2. Emphasis original. Here, Haraway is citing Thom van Dooren, *Flight Ways: Life at the Edge of Extinction* (New York: Columbia University Press, 2014), 60.

of the organic and inorganic actants meshed in a commons assemblage might co-generate or co-shape normative relations in that particular assemblage.[134]

In the light of New Materialist onto-epistemology, human commoners are best seen as members of a "specifically endowed (but not special) environment-making species"[135] entangled with other specifically endowed, but not necessarily special, non-human kinds of commoners. In this connection, it is useful to embrace "sympoiesis" rather than "autopoiesis." Weber — writing in his analytical, biological, scientist mode rather than in his poetic, existentialist mode — embraces autopoiesis for its emphasis on the capacity of organisms to self-produce: "organisms," while "no longer viewed as genetic machines, [are] basically […] materially embodied processes that *bring forth themselves.*"[136] Haraway, however, in line with the assemblage thinking of New Materialism, prefers sympoiesis, precisely because rather than emphasizing the "self-producing," it emphasizes the "collectively producing." Haraway observes, moreover, that

> many systems are mistaken for autopoietic when they are really sympoietic. I think this point is important for thinking about rehabilitation (making liveable again) and sustainability amid the porous tissues and open edges of damaged but still ongoing living worlds, like the planet earth and its denizens in current times being called the Anthropocene.[137]

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134 Margherita Pieraccini, "Property Pluralism and the Partial Reflexivity of Conservation Law: The Case of Upland Commons in England and Wales," *Journal of Human Rights and the Environment* 3, no. 2 (2012): 273–87; Andreas Philippoulous-Mihalopoulos, "The Triveneto Transhumance: Law, Land, Movement," *Politica and Societa* 3 (2012): 447–68.

135 Haraway, "Tentacular Thinking," 185, n.52.

136 Weber, *Enlivenment,* 30, emphasis added. Haraway argues that "[autopoietic systems are hugely interesting — witness the history of cybernetics and information sciences; but they are not good models for living and dying worlds and their critters […]. Poiesis is symchthonic, sympoietic, always partnered all the way down, with no starting and subsequently interacting 'units'" ("Tentacular Thinking," 33).

137 Haraway, "Tentacular Thinking," 33.

Sympoiesis also complicates the boundaries of assemblages and commons by emphasizing trans-corporeal flows of information, affect, and distributed agency: Sympoiesis refers to

> collectively-producing systems that do not have self-defined spatial or temporal boundaries. Information and control are distributed among components. The systems are evolutionary and have the potential for surprising change.[138]

As Haraway argues, "[i]f it is true that neither biology nor philosophy supports the notion of independent organisms in environments, that is, interacting units plus contexts/rules, then sympoiesis is the name of the game in spades."[139] Sympoiesis, in rejecting interacting units plus contexts and rules, and in emphasizing the membranous, porous nature of system-entanglements, offers rich insights and questions for commons imaginaries. Are commons sympoietic? Should they be understood as such? What is gained and lost in such an understanding? What about seeing them as "multipoietic?" Would the removal of the "sym-" open up a different space for critical reflection on power relations and struggles "internal" to commons in a way responsive to critical histories of exclusion? Do commons have self-defined boundaries, or are they more accurately to be conceived of as contingently identified assemblages with frayed and porous membranes, which underline the need for sustained attention to questions of extension, membership, and power? How is the "skin" of any particular commons to be identified — and for which purposes? Who are the potential (human and non-human) commoners at stake in any given commons assemblage — and in relation to what? If thinking of interacting units plus contexts and rules is out, how are commons normativities to be co-woven? What might such questions mean for digital commons? To what extent can who "we" are bound up with and

138 Ibid., citing M. Beth L. Dempster, "A Self-Organizing Systems Perspective on Planning for Sustainability," MA Thesis, University of Waterloo, 1998.
139 Haraway, "Tentacular Thinking," 33.

in what ways be de-localized in physical terms, but re-localized in material intimacies forged by trans-corporeal relationalities that overspill particular ground-based commons boundaries — such as is the case with cyber-commons? We could go on.

I think one important gain from framing a commons as an assemblage and/or as a site of sympioetic/multipoetic commoning is its focus on co-negotiation, contingency, and the need to analyse critically what counts and for whom and why in a messy play of world-making. It also means admitting, and tracing the full ethical implications of the fact that, in Bryant's words, the

> nonhuman […] in the form of technologies, weather patterns, resources, diseases, animals, natural disasters, the presence or absence of roads, the availability of water, animals, microbes, the presence or absence of electricity and high speed internet connections, modes of transportation, and so on […] and many more besides play a crucial role in bringing humans together in particular ways.[140]

Thinking of this kind is significant for a political ecology of the commons. It calls for fresh attention to the "graspings, frayings, and weavings, passing relays again and again, in the generative recursions that make up living and dying."[141] It invites an accounting for the "shifting states and capacities, which in turn produce further shifting states and capacities in a non-linear, rhizomatic way that spreads out in all directions sometimes in patterned ways, sometimes unpredictably."[142] It invites "tentacular thinking," which is the kind of thinking that moves along with spider-like feelers, rather than buying into outdated and

140 Bryant, *The Democracy of Objects,* 23–24.

141 Ibid., 33.

142 Anna Grear, "Foregrounding Vulnerability: Materiality's Porous Affectability as a Methodological Platform," in *Research Methods in Environmental Law,* eds. Andreas Philippoulos-Mihalopoulos and Valerie Brooks (Cheltenham: Edward Elgar, 2017) 3–28, at 23.

destructive illusions of ocularcentric human mastery (such as those driving neoliberal environmental governmentality).

As Haraway insists, it matters "what ideas we use to think other ideas."[143] Tentacular thinking inspires,

> ecology of practices, [a commitment] to the mundane articulating of assemblages through situated work and play in the muddle of messy living and dying. Actual players, articulating with varied allies of all ontological sorts (molecules, colleagues and much more) must compose and sustain what is and will be. Alignment in tentacular worlding must be a seriously tangled affair![144]

Commons are ideally placed to function as "on-the-ground collectives capable of inventing new practices of imagination, resistance, revolt, repair and mourning, and of living and dying well."[145] Commons are assemblages richly gifted with intimate possibilities for "staying with the trouble," staying willingly immersed in the messy incompletion of resistive, trans-corporeally aware, scientifically-sensing, living against the managerial coloniality of the Anthropocene-Capitalocene. Haraway's important invitation to "stay with the trouble" in this way is precisely what necessitates "making kin" of all kinds. There is an urgent need to learn "practices of becoming with" more-than-human collaborators. As Haraway puts it,

> We are at stake to each other. Unlike the dominant dramas of Anthropocene and Capitalocene discourse, human beings are not the only important actors in the Chthulucene, with all other beings able simply to react. The order is reknitted:

143 Haraway, "Tentacular Thinking," 34.
144 Ibid., 42.
145 Ibid., referring to the work of Philippe Pignarre and Isabelle Stengers, *La sorcellerie capitaliste: Pratiques de désenvoûtement* (Paris: La Découverte, 2005).

> human beings are with and of the earth, and the biotic and abiotic powers of this earth are the main story.[146]

Haraway is right to argue that "diverse human and nonhuman players are necessary in every fiber of the tissues of the urgently needed Chthulucene story."[147] There are no guarantees of immunity from neoliberal subversion of commons, but actively turning towards more-than-human commoners — allowing them actively to co-shape the normative praxis of a commons — holds out a space, at least, where a resistive, alert, subversive onto-politics of radical inclusion and care might work against neoliberal reductionisms and objectifications. Certainly, "in an age where we are faced with the looming threat of monumental climate change, it is [now] irresponsible to draw our distinctions in such a way as to exclude nonhuman actors."[148] It seems vital to move beyond thinking and speaking of commons as "human-human" and "human-nature" relations and explicitly to embrace commoning as a "human-non-human" co-practice for which nonhuman commoners are active, generative contributors.

While eco-romanticism presents a powerful emotional appeal to the reader's sense of embodied entanglement, in the final analysis (and despite its potential to reach some who might not be moved by alternative vocabularies), it provides an incomplete answer to the global scale and complexity of the problems and dilemmas to which new commons movements are an insurgent response. And, as powerful and valuable as poetics is as a tool of existential awakening, it is not poetic materialism that ultimately offers the most critically informed, injustice-sensitive grounding for commons ontology in an age of systematic oppression. The trans-corporeal nature of climate risk and the toxic flows marking all planetary existence suggests the vital importance of a highly politicized and critical commons onto-epistemology, one alive to the potentially oppressive implica-

146 Haraway, "Tentacular Thinking," 55.
147 Ibid.
148 Bryant, *The Democracy of Objects,* 24.

tions of "nature" as a construct, alert to its pattern of historical injustices and their links with contemporary mal-distributions of risk, hazard, life, and death. New Materialism, perhaps especially as deployed by feminist New Materialist thinkers, arguably offers vocabulary, wide-ranging critical literacy, and accounts of an emergent onto-epistemology especially suited to re-grounding commoning as a form of human–non-human onto-insurgency against the multiple, pathological closures of the Anthropocene-Capitalocene.