

Steps to a Material Ecocriticism. The Recent Literature About the “New Materialisms” and Its Implications for Ecocritical Theory

Serenella Iovino
Università degli Studi di Torino

Stacy Alaimo and Susan Hekman, eds. *Material Feminisms* (Bloomington: Indiana U P, 2008), 448pp

Stacy Alaimo, *Bodily Natures: Science, Environment, and the Material Self* (Bloomington: Indiana U P, 2010), 448pp.

Jane Bennett, *Vibrant Matter: A Political Ecology of Things* (Durham and London: Duke U P, 2010), 200pp.

David Abram, *Becoming Animal* (New York: Vintage Books, 2010), 336pp.

The year 2010 was a true moment of explosion for scholarship about the “new materialisms.” One after another, important and thought-provoking volumes were published, such as Susan Hekman’s *The Material of Knowledge*, Jane Bennett’s *Vibrant Matter*, Stacy Alaimo’s *Bodily Natures*, David Abram’s *Becoming Animal*, and two valuable collections of essays: Diana Coole and Samantha Frost’s *New Materialisms* and the *Oxford Handbook of Material Culture Studies*, edited by Dan Hicks and Mary C. Beaudry, a monumental book (774 pages) gathering “a range of different perspectives upon material things that emerge from archaeology and socio-cultural anthropology, and from complementary work in geography and STS [science and technology studies]” (4). In 2011, more titles exploring this new field have appeared. Among these, Vicky Kirby’s *Quantum Anthropologies* and Levi Bryant’s *The Democracy of Objects* mark respectively the entering in the debate of topics such as deconstructionism and of the so-called “object-oriented-ontology.”

Due to this richness of voices and contributions from a range of disciplines that intersect with the environmental humanities, it is not surprising that the “turn to the material,” as Alaimo has called it, is also beginning to have effects on ecocriticism. But what is exactly the meaning of the “new materialisms,” these new ways of conceptualizing materiality “for which no overall orthodoxy has yet been established” (Coole and Frost 4), and why are they so important for environmental studies?

As Diana Coole and Samantha Frost write in their introduction to *New Materialisms*, at the very heart of the debate is “nothing less than a challenge to some of the most basic assumptions that have underpinned the modern world, including its normative sense of the human and its beliefs about human agency, but also regarding its material practices, such as the ways we labor on, exploit, and interact with nature” (4). History, agency, interaction with nature, “sense of the human”: the scope of the debate appears, from the very beginning, wide-ranging and interdisciplinary. And so it is, in fact. Prepared in the last two decades by the ground-breaking works of Donna Haraway, Bruno Latour, Andrew Pickering, Manuel De Landa, Joseph Rouse, Judith Butler, Rosi

Braidotti, and by other thinkers in the fields of feminism, science studies, ontology, sociology, anthropology, and epistemology, the characteristic of this debate is the habit of thinking “diffractively” the emerging dynamics of matter and meaning, of body and identity, of being and knowing, of acting and becoming. All these aspects, in other words, are conceived and thought through one another, matter being, as physicist Karen Barad says, a “congealing of agency” (*Meeting the Universe* 151) and an ongoing process of embodiment which involves and mutually determines cognitions, social constructions, scientific practices, ethical attitudes.

The proximity between the new debate on materiality and the field of ecocriticism was clearly implied by *Material Feminisms* (2008), a book that, together with Barad’s *Meeting the Universe Halfway* (2007), can be considered as a major theoretical groundwork for most of the titles which appeared in 2010-11. Edited by Stacy Alaimo and Susan Hekman, *Material Feminisms* expresses the need for a culture that, building on the insights of earlier forms of feminism, would “radically rethink materiality, the very ‘stuff’ of bodies and natures” (Alaimo and Hekman, “Introduction” 6). The main concern of the collection is to overcome the schism between matter and its cultural constructions introduced by some trends of postmodernism and poststructuralism, and to reconcile the “material” and the “discursive” from a non-dualistic perspective. In this framework, nature is not a passive social construct but rather “an agentic force that interacts with and changes the other elements in the mix, including the human” (7). “Matter” is here a multifaceted concept: it is the “materiality of the human body and the natural world” (1), considered as the substance of being, but also, more expansively, as a terrain of knowledge and action, something which enriches the ontological perspective with a wider field of significance. Accordingly, material formations, human and nonhuman bodies, are “emergences” whose existence and meanings are strictly connected to the discursive dimensions with which they are entangled.

The ontology addressed here is a complex intersection of bodies, natures, and political discourses--a being-in-the-world where embodiment and discursivity are co-extensive and mutually permeable. As Nancy Tuana lucidly explains in her essay “Viscous Porosity: Witnessing Katrina”:

There is a viscous porosity of flesh--my flesh and the flesh of the world. This porosity is a hinge through which we are of and in the world. I refer to it as viscous, for there are membranes that effect the interactions. These membranes are of various types--skin and flesh, prejudices and symbolic imaginaries, habits and embodiments. They serve as the mediator of interaction. (199-200)

The awareness about the way these interactions work is essential to a process of emancipation and liberation: “Political decisions are scripted onto material bodies; these scripts have consequences that demand a political response on the part of those whose bodies are scripted” (Alaimo and Hekman, “Introduction” 8). This point, that resonates significantly with the assumptions of Wendy Wheeler’s *The Whole Creature*, another important book tangentially involved in the material turn (“our essential social being is written in our bodies in terms of flourishing or [...] illness,” 12), gives an interesting

insight into the consequences of the entanglement of matter and meaning for ecocriticism. Besides including essays that couple feminist conceptualizations with ecocritical analysis (for example, Alaimo’s “Trans-corporeal Feminism” and Gae Sandiland’s “Landscape, Memory, and Forgetting”) *Material Feminisms*, in fact, stresses the dimension of what we can call a ‘storied matter.’ This point appears in manifesto-essays, such as Barad’s “Posthuman Performativity,” in which the feminist physicist explicitly remarks that “the matter of bodies [has] its own historicity,” and that “biological forces [are] [...] always already historical ones” (127). As she specifies, “materiality is discursive,” in that “[d]iscursive practices and material phenomena do not stand in a relation of externality to one another;” rather, they are “mutually implicated” (140). But the “narrative” connection between matter and meaning becomes even clearer, for example, in Donna Haraway’s essay, “Otherworldly Conversations, Terrain Topics, Local Terms.” Here the notion of “conversation” sustains a vision of material phenomena as a “stunning narrative [...] of structural functional complexity” (163). Analyzing “stories” of human-nonhuman encounters, Haraway’s concept of the “material-semiotic” co-emergence in what she has elsewhere called “naturecultures” is expressed by the idea that our earthly life, the dimension we materially (and semiotically) share with nonhuman beings, is a cohabitation of stories, and that an awareness about this shared dimension can be enhanced by way of conceiving “inhabitable narratives about science and nature” (167).

From a perspective that embraces ontological, socio-ecological, and scientific stances, *Material Feminisms* emphasizes the power of matter to build dynamics of meaning in and across bodies, thus paving the way to a new dimension of ecocriticism. This new, “material” ecocriticism could trace narratives of matter not only as they are re-created by literature and other cultural forms, but also as they emerge in physical configurations, those “viscously porous” interlacements of flesh and symbolic imaginaries. There are many points from which we can start exploring “narratives” about materiality. The body is certainly one of those. Being the “middle place” where matter encounters and enmeshes with the discursive forces of politics, society, technology, identity, the body is the site where matter more clearly performs its narratives.¹ Here, as Susan Hekman put it, “the social is not separated from the natural [...] but rather they continually interpenetrate each other. Bodies, texts, machines, human and nonhuman entities continually interact in complex relationships” (*The Material of Knowledge* 15). That human embodiment, in particular, is a problematic entanglement of agencies is evident: think, for example, of the increasing rate of socio-environmental-related illness, such as various forms of cancer or multiple chemical sensitivity (MCS), or simply to the socio-cultural and technological forces which interfere with the material life of gendered bodies. However, the broader perspective opened by the new materialisms makes even more evident the fact that there is a structural interplay between the human and the nonhuman, and that this interplay

¹ I borrow the expression “the middle place” from Joni Adamson, *American Indian Literature, Environmental Justice, and Ecocriticism: The Middle Place*. Tucson: U of Arizona P, 2001.

produces meanings which are socially relevant. In a more specific eco-narrative sense the body, revealing the reciprocal interferences of organisms, ecosystems, and other substances, is a living text in which ecological and existential relationships are inscribed in terms of health or disease. This becomes strikingly evident 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” (Alaimo, *Bodily Natures* 17).

In 2006 this topic had been treated and very convincingly conceptualized in the framework of biosemiotics by Wendy Wheeler’s *The Whole Creature*. From a neo-materialist viewpoint, however, the book that more than others explores the narratives of these material-discursive “hazardous landscapes” is Stacy Alaimo’s *Bodily Natures: Science, Environment, and the Material Self* (winner of the 2011 ASLE Book Prize). Moving from the feminist perspective of her co-edited volume, Alaimo opens an intense and insightful dialogue with a number of thinkers, environmental activists, and literary authors. Shaping her vision in a theoretical exchange with Karen Barad, Donna Haraway, Andrew Pickering, Nancy Tuana, Bruno Latour, and Ulrich Beck, she develops a “material ethics” based on the idea of “trans-corporeality.” Highlighting the role of the often-undetected material forces, or “flows of substances [...] between people, places, and economic/political systems” (Alaimo 9), trans-corporeality conveys an interesting vision of the “ecological model” of interconnections. At a first sight, this concept appears to be modeled upon Lawrence Buell’s ecocritical use of the geographic notion of “trans-local.” Talking about dynamics related to place in his book *The Future of Environmental Criticism*, Buell stated: “One cannot theorize scrupulously about place without confronting its fragility, including the question of whether ‘place’ as traditionally understood means anything anymore at a time when fewer and fewer of the world’s population live out their lives in locations that are not shaped to a great extent by translocal [...] forces” (62-63). This notion, in Buell’s view, is instrumental to pushing the ecocritical concept of place in directions that go “toward environmental materiality [and] toward social perception or construction” (63). Exploring the crossing territories of environmental materiality and of social perception and construction, Alaimo’s trans-corporeality radicalizes the view of trans-locality, and pictures the transit maps between the “inside” and the “outside” of every bodily form. In fact, whereas trans-locality traces the flows and migrations of people, goods, and identities across places, trans-corporeality is a conceptual descriptor for the flows of substances and discourses across bodies, reconfiguring the boundaries between the self and the environment, as well as between all material substances in material contexts.

Alaimo provides a number of definitions for trans-corporeality. In her programmatic essay “Trans-Corporeal Feminism and the Ethical Space of Nature,” included in *Material Feminisms*, this notion was introduced as “the time-space where human corporeality, in all its material fleshiness, is inseparable from ‘nature’ and ‘environment’” (238). In *Bodily Natures*, it is tied to the “interchanges and interconnections between various bodily natures,” the “movement across bodies,” and the “material interconnections of human corporeality with the more-than-human world”

(2). The ethical and political consequences for the re-configuration of both the notion of environment and the sense of the human are palpable:

Imagining human corporeality as trans-corporeality, in which the human is always intermeshed with the more-than-human world, underlines the extent to which the corporeal substance of the human is ultimately inseparable from “the environment.” [...] Indeed, thinking across bodies may catalyze the recognition that the environment, which is too often imagined as inert, empty space or as a resource for human use, is, in fact, a world of fleshy beings with their own needs, claims, and actions. By emphasizing the movement across bodies, trans-corporeality reveals the interchanges and interconnections between variously Bodily Natures. But by underscoring that *trans* indicates movement across different sites, trans-corporeality opens up a mobile “space” that acknowledges the often unpredictable and unwanted actions of human bodies, non-human creatures, ecological systems, chemical agents, and other actors. (2)²

Along with the attention paid to corporeal interchanges in general, trans-corporeality functions as a comprehensive epistemological frame for “toxic discourse,” thus filling the gap pointed out by Buell’s 1998 famous article (“Toxic Discourse” 641). This way of conceiving the body as a process of embodiment rather than as a pre-constituted and “sealed” individuality redefines the image of the self: the human self is a process of interacting agencies rather than a fixed, immobile, and self-referential identity. The ecocritical implications of this vision reside not only in a new key for reading literature with specific political implications (like in cases of environmental justice and environmental health narratives), but also in a new conceptual model for interpreting material practices and social-discursive constructions. In analyzing what she calls “material memoirs,” or in her chapter on “Deviant Agents: The Science, Culture, and Politics of Multiple Chemical Sensitivity,” Alaimo takes the body literally as a text where the human self is narrated by an entanglement of ecologies (politics, society, culture, nature etc.) and by “networks that are simultaneously economic, political, cultural, scientific, and substantial” (20). The intertwining between the notions of ecology, cognitive practices, and ontology (as well as, we could say, oncology) describes a zone in which material and discursive analyses of the body are unified in a non-binary perspective of interrelationship and “intra-activity.” Moving from Karen Barad’s concept of “intra-action” (the substantial constitution of phenomena as a being-in-relation of objects and agencies) the material and the discursive dimension shape and condition each other through a game of social and natural forces, bodies, natures, political identities.³ It is interesting to see the way Alaimo applies this notion to the bodies of chemically reactive people (ch. 5, “Deviant Agents”).

The ethics implied by this perspective emphasizes that the relation between human beings and the nonhuman world is not one between an “internal” self and an “external” place, but rather a complex and unitary field of existence: “A trans-corporeal

² See also Alaimo, “Trans-Corporeal Feminism and the Ethical Space of Nature” 238-39.

³ Karen Barad’s theory of “agential realism,” conceives matter as “*substance in its intra-active becoming—not a thing but a doing, a congealing of agency*” (*Meeting the Universe* 151). Agency itself is not connected to an agent, an individual subject, but it is rather a process of “enactment” in which material entities co-emerge simultaneously, shaping what we call “phenomena.”

ethics calls us to somehow find ways of navigating through the simultaneously material, economic, and cultural systems that are so harmful to the living world and yet so difficult to contest or transform” (18). Being the cultural and epistemic dimension of living-in-the-world directly functional to action, it is apparent that the development of such an ethics entails necessarily a broad cognitive dimension. Hence, Alaimo’s insistence on the role of science in the narratives connected to this vision, and in fact science in its multiple applications and connotations, from environmental justice to science fiction, figures all over *Bodily Natures*. At the same time, it is also clear that a vision in which agency is no longer “considered within the province of the rational” (143) projects the human beyond itself, opening to a “posthuman environmental ethics in which the flows, interchanges, and interrelations between human corporeality and the more-than-human world resist the ideological forces of disconnection” (142). In this world, pervaded (and made) by co-emergences which intersect and co-operate with human life, the sense of environmental responsibility (if we might still talk about the “environment”) can only come, Alaimo concludes, from an “hospitable” ethics, an “ethics that is not circumscribed by the human but is instead accountable to a material world which is never merely an external place but always the very substances of our selves and others” (158).

The idea of the interplay of physical substances (whether natural or human-made) and biological bodies sheds light on the unpredictability of causal lines, and on the impossibility of delineating a clear-cut boundary between life-forms and other material entities: even what is not recognizable as “alive” acts and has effects. This inclusive landscape of being and agency, and the consequent remodeling of ethical and political space, is a feature that *Bodily Natures* has in common with another significant book, *Vibrant Matter: A Political Ecology of Things*, by Jane Bennett. However, while Alaimo stresses the socio-political aspects of our material being-in-the world, Bennett bases her “political ecology of things” upon an ontological narrative intended to restore the enchantment of the world in the agentic encounter between humans and nonhumans. This highlights another important element in the conceptualization of a “material” ecocriticism. The challenge which the material turn poses to ecocriticism consists in the need to explore new narrative dimensions and new forms of narrative agency. If the concept of agency is no longer limited, to quote Alaimo, to “the province of the human,” and if matter emerges in formations of meanings and bodies on a time-space endowed with an “ongoing historicity,” it is almost impossible not to see material agencies as makers of stories. Consonant with these ideas, *Vibrant Matter* is an ontological account aiming to “articulate a vibrant materiality that runs alongside and inside humans” (viii), using theories, images, and narratives to “direct sensory, linguistic, and imaginative attention toward a material vitality” (19). In such “articulation,” matter arises as the subject of an “onto-tale in which everything is, in a sense, alive” (117). This “onto-tale,” which we could explain as an auto-biography, a self-representation of matter in its becoming, is at the same time, to use another of Bennett’s coinages, an “alter-tale.” It is a “counter-story” (Bennett, *Enchantment* 8) intended to redeem the inner “enchantment” of things, whose vitality—suppressed by the “cultural

narrative of disenchantment” (4)—can inspire in the human subject a deeper (ethical, emotional, cognitive) participation in the worldly emergences of forms and bodies.⁴

In its theoretical density, *Vibrant Matter* interlaces suggestions from a very multifaceted intellectual horizon. Expanding on the eclectic neo-materialist vision already presented in her previous book, *The Enchantment of Modern Life* (2001), in *Vibrant Matter* Bennett retrieves an immanentist tradition that includes Spinoza, phenomenology, Bergson, Dewey, process philosophy, and the “materialist” trends of postmodernism, represented by Deleuze and Guattari, and Michel Foucault. Of particular importance is, as one might expect, Bruno Latour’s “non-modern” onto-epistemology, which is a recurrent source of inspiration for notions such as “actant” and “assemblages,” frequently used by Bennett.

Whereas at the center of Alaimo’s trans-corporeal intersections was, ultimately, the human body, here the emphasis falls on impersonal matter and things, and on their “force” and “vibrant life” (1). Thinking over the interplay between human life and other “actants” (electric grids, food, stem cells, debris), Bennett traces non-linear and posthuman patterns of materialization and causality, inviting a transformation of the ethical and political categories. In fact, complementing the anthropocentric idea of “agent” with Latour’s notion of “actant” and switching from causal linearity to “emergent causality,”⁵ Bennett’s “vital materialism” opens a more co-operative and horizontal prospect of reality, one that reduces the ontological distance between the human and the nonhuman (“Materiality is a rubric that tends to horizontalize the relations between humans, biota, and abiota,” 112). The ethical aspects of this horizontalism are co-dependency, enlargement of the horizon of value beyond the traditional humanistic lookout and awareness about the complex landscape of actants in which the human action is situated. As a result, Bennett poses a less human-chauvinistic and exploitative relation to the nonhuman world. As she explains:

If matter itself is lively, then not only is the difference between subjects and objects minimized, but the status of the shared materiality of all things is elevated. All bodies become more than mere objects [...]. Vital materialism would thus set up a kind of safety net for those humans who are now, in a world where Kantian morality is the standard, routinely made to suffer because they do not conform to a particular (Euro-American, bourgeois, theocentric, or other) model of personhood. The ethical aim becomes to distribute value more generously, to bodies as such. Such a newfound attentiveness to matter and its powers will not solve the problem of human exploitation or oppression, but it can inspire a greater sense of the extent to which all bodies are kin in the sense of inextricably enmeshed in a dense network of relationships. And in a knotted world of vibrant matter, to harm one section of the web may very well be to harm oneself. (13)

Matter is vibrant and lively in this “knotted world,” and its agency is at work at every turn: in debris and “nonorganic life” (6), in minerals, food, metals, in genetic codes, in microbes, in the blast of a blackout; it is enfolded in and around our bodies. As in

⁴ The idea of an “alter-tale” intended as a way to “re-enchant reality” is developed by Jane Bennett in *The Enchantment of Modern Life*.

⁵ On “emergent causality,” as a “dicey” process “irreducible to efficient causality,” by which “new entities and processes periodically surge into being” (179), see also William E. Connolly, “Materialities of Experience,” in Coole and Frost’s *New Materialisms*.

Alaimo’s book, here, too, the concept of “material self” has little to do with the Cartesian subject, revealing instead the intrinsic openness of its processes of becoming. Humans and their bodies, in fact, are forms of “congregational agency” (34), assemblages of organic and inorganic matter, and therefore mixed with alien presences, always lurking, always reminding us of “the very radical character of the (fractious) kinship between the human and the nonhuman”: “My ‘own’ body is material, and yet this materiality is not fully or exclusively human. My flesh is populated and constituted by different swarms of foreigners” (112). Here Bennett’s reference is explicitly to the colonies of bacteria that enable our life to flourish and that constitute the human microbiome, even though they do not have anything, in their genetic code, that can be defined as “human.”⁶ This theme is not new in environmental philosophy. In fact, reflecting on the shadowy otherness inhabiting the human mitochondrial structure in his book *The Natural Alien* (1985), Neil Evernden asked:

Mitochondria, the energy-providing structures within each cell, replicate independently of the cell and are composed of RNA, which is dissimilar to that of the rest of the cell. Apparently the mitochondria move into the cells like colonists and continue their separate existence within. We cannot exist without them, and yet they may not strictly be “us.” Does it mean that we must regard ourselves as colonies? [...] Where do we draw the line between one creature and another? Where does one stop and the other begin? Is there even a boundary between you and the non-living world, or will the atoms of this page be part of *you* tomorrow? In short, how can you make any sense of the concept of man as a discrete entity? (39-40)

Compared to Evernden, who focused on (and questioned) biological boundaries, Bennett is chiefly concerned with the relevance of the notion of agency. Evernden presented the human and the nonhuman as connected, in their living horizon, on the basis of natural processes. Bennett takes a step further. In her vision, life and non-life, human and nonhuman, are only different forms through which matter emerges in its agentic capacity. Human and nonhuman, like organic and non-organic forms, are differential becomings in the entanglements of agentic matter.

This confronts us with another important idea: if material agency is vibrant, unpredictable and alien, human agency, too, “[i]n the face of every analysis, remains something of a mystery” (34). The function of an onto-epistemology based on the vitality of matter is therefore to shed light on the converging pathways within these mysterious entanglements, and to inaugurate a political ecology more adherent to the geography of agentic forces. The vitality of matter, in fact, does not imply a form of new-age animism or of material spiritualization but is, in turn, rooted in the immanence of a scientific and ecological vision. Hence, Bennett’s conclusion is not only ethical; it is political: “In a world of vibrant matter, it is [...] not enough to say that we are ‘embodied.’ We are, rather, *an array of bodies* [...]. If more people marked this fact more of the time, [...] could

⁶ The passage quoted by Bennett to exemplify this ‘alien residence’ in our bodies is compelling. The crook of the human elbow, she reports, is “a special ecosystem, a bountiful home to no fewer than six tribes of bacteria. [...] They are helping to moisturize the skin by processing the raw fats it produces. [...] The bacteria in the human microbiome collectively possess at least 100 times as many genes as the mere 20,000 or so in the human genome” (citation from Nicholas Wade, “Bacteria Thrive in Crook of Elbow, Lending a Hand.” *New York Times*, 23 May 2008; see Bennett, *Vibrant Matter* 112).

we continue to produce and consume in the same violently reckless ways?” (112-13). And again: “The hope is that the story will enhance receptivity to the impersonal life that surrounds and infuses us, will generate a more subtle awareness of the complicated web of dissonant connections between bodies, and will enable wiser interventions into that ecology” (4).

What are the cognitive strategies that we can envision from this story of vibrant matter? It is not by chance that literature and the language of imaginative representation are a recurring topic in Bennett’s book. In fact, imagining an open horizon of actants requires distinctive narrative attitudes. In order to achieve this, Bennett rehabilitates anthropomorphism as a heuristic strategy, a strategy aimed at reducing the (linguistic, perceptive, and ethical) distance between the human and the nonhuman. So understood, anthropomorphism is not instrumental to a human-centered and hierarchical vision but, quite the opposite, it “works against anthropocentrism” (120). And, instead of stressing categorical divides, it can reveal similarities and symmetries between the human and the nonhuman: “We need to cultivate a bit of anthropomorphism--the idea that human agency has some echoes in nonhuman nature--to counter the narcissism of humans in charge of the world” (xvi). The narcissism of our species is both material and discursive: humans, in fact, are not only in charge of the world but also of the word. The counter-story that a vibrant materialism hands to ecocriticism is an exercise in “listening,” we could say, using a Heideggerian concept: receptively listening to the others’ voice, the others’ stories, the stories of the different subjects populating with us the plane of existential immanence. Bennett’s political ecology of things therefore ushers in an onto-poetic dimension in which the place for a deeper, even “mystical” experience of the more-than-human is disclosed. And so, *Vibrant Matter* culminates in a “Creed for the would-be materialists,” a Creed with the hint of a post-environmentalist political project: “I believe that encounters with lively matter can chasten my fantasies of human mastery, highlight the common materiality of all that is, expose wider distribution of agency, and reshape the self and its interests” (122).

Bennett’s book displays a characteristic trait, which is common to those new-materialist thinkers who are not directly tied to the feminist tradition. Whereas material feminists paid substantial attention to the body, and notably to the human or sentient body, in other contributions the center of intersection of material agency becomes more and more “diffused,” unstable, and widely distributed. The focus, in other words, is more and more “outside” the human and the sentient. The consequences for ecocriticism are, as pointed out, that a broader range of narrative agencies are brought to light, and that a non-, or post-subjective story-telling can become a subject of critical analysis. In this ideal march from the “in-side” to the “out-side,” David Abram’s *Becoming Animal* deserves closer attention, and his is the last representative work within the purview of the new materialisms I would like to examine.

Becoming Animal is a study of the “elemental” embodiments of the self and of the permeability of experience as a more-than-human practice that involves imaginative and biological processes. Like in *The Spell of the Sensuous*, the main theoretical referent is phenomenology. But here the horizon is somehow richer: more or less explicitly

Abram’s mind-body monism entails conceptualizations inspired from sources such as Bateson’s ecology of mind, Damasio’s neurological theory of consciousness, Lakoff and Johnson’s theory of embodied metaphors, and Varela and Maturana’s autopoiesis, among others. Working from a non-dualistic perspective, Abram stresses the concrete links between life and language, mind and sensorial perception, allowing for the kinship between “out-side” and “in-side,” the mind and the world.

Here notions such as creativity, mind, thought, and imagination are not described as subjective functions of the human being in its eminently spiritual power to act independently from the materiality of the world. Rather, they are poetically re-located across and beyond the human, and seen as common to all things and forces, regardless of their biological status. Exemplary, in this respect, is the case of the wind and the rock that creatively shape each other in a “dance of agency”⁷: “the crevassed contours of the mountains have been carved over eons by the creativity of wind and weather, as those mountains now carve the wind in turn, coaxing spores out of the breeze and conjuring clouds out of the fathomless blue” (271). This is possible, Abram suggests, developing on ideas coming from Bateson’s epistemology and from eco-phenomenological thought, because

mind is [...] like a medium in which we’re situated, and from which we are simply unable to extricate ourselves without ceasing to exist. Everything we know or sense of ourselves is conditioned by this atmosphere. We are intimately acquainted with its character, ceaselessly transformed by its influence upon us and within us. [...] We are composed of this curious element, permeated by it, and hence can take no distance from it. (125-26)

The notion of a “material imagination” (an ancient idea, re-employed in modern times especially by Gaston Bachelard) is crucial in Abram’s phenomenological ecology. As he puts it, imagination, like mind or psyche, is a “visceral experience of the world” (288), an “impersonal awareness” in which “our variously sensitive bodies are situated” (272). In this all-encompassing material-ideal dimension, intelligence is not “a strictly centralized” human phenomenon (188) but “a luminous quality of the earth” (132), and the earth itself is “a terrain filled with imagination” (270-71). This provides ecocriticism with an original interpretive key to understand, in the light of the new materialisms, the discourse of wilderness, of nature writing, and of place narrative. In fact, tracing the embodiments of mind in the “wildness of things” (111), wilderness appears as a more-than-human entanglement of emerging bodies and meanings, a “state of mind” (82) in which we are “carnally immersed” (101, 123): “What if mind is not ours, but is Earth’s? [...] What if like the hunkered owl, and the spruce bending above it, and the beetle staggering from needle to needle on that branch, we all partake of the wide intelligence of this world?” (123). It is worth noting that, besides being poetically evocative, this image of a materially “diffused mind” resonates with recent research in biological

⁷ I take the image of a “dance of agency” from another important figure of the material turn, the British epistemologist Andrew Pickering (*The Mangle of Practice* 22).

sciences, like that of a “wood-wide-web,” according to which plants create networks, exchange electrical and chemical signals, and enter into co-operative arrangements.⁸

Finally, Abram provides his own version of trans-corporeality: “the body is *itself* a kind of place—not a solid object but a terrain through which things pass, and in which they sometimes settle and sediment” (230). Here, like in Alaimo, the body is a “sensitive threshold through which the world experience itself” (230), its natural-cultural co-emergences, its sociopolitical dynamics, its ecologies, and its interplay with the “outside.”

Along with many of the ones I have mentioned at the beginning of this essay, the examined works are exemplary of the impact that the new materialisms might have on ecocriticism. The main feature of this encounter between ecocriticism and the new materialisms, in my view, is the link between ontology, imagination, and politics. In both cases, the emphasis is put on the necessity of renegotiating the borders of the human, and of developing a more inclusive vision of the earthly dynamics.

The ontological vision of material ecocriticism presupposes and entails a political ecology. Narrative encounters of human and nonhuman agencies can disclose new creative attitudes and political projects. How would, for example, the maps of sustainability change, if we read “through bodies” the stories of these encounters? How would we deal with waste, or waste management, if we followed the narrative patterns that matter, in visible and invisible forms, draws in and across bodies? Traversed by “dicey processes” (Connolly 179), the narrative patterns that a material ecocriticism will explore are not linear. Their geometry is non-Euclidean, they emerge like fractals and, like ecological holograms, they are composed by parts in which the whole is always replicated, mirrored, and intimately co-implicated. These material narratives are, like every story, interpretable only using the categories of complexity. Originated from complex systems and arrays, if taken seriously they will give way to new landscapes, both political and imaginative: to a politics and poetics of bodies, of assemblages, of collectives, of wild things and “queer families.” Prepared by this courageous and visionary scholarship about the power of matter and the structural openness of the human self, a material ecocriticism can prelude to new ways of perceiving and thinking about matter. This, far from being the ultimate form of anti-humanism, is going to shed a more realistic—and gentle—light on our place in a widely agentic world.

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⁸ See Helgason et al., “Ploughing up the Wood-Wide Web?,” *Nature* 394 (30 July 1998): 431; and Giovannetti et al., “At the Root of the Wood Wide Web: Self Recognition and Non-Self Incompatibility in Mycorrhizal Networks.” *Plant Signal Behavior* 1.1 (2006): 1–5. I am indebted for this information to Matteo Andreozzi.

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