



Matter, Consciousness, and the Anthropocene

Panpsychism Encounters Vital Materialism and Historical Materialism

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Abstract The ways social theorists conceptualize the material world influences their approach to conceiving and addressing the environmental challenges of the Anthropocene. This article uses panpsychist theory, which holds that consciousness is a fundamental and ubiquitous property of the natural world, as a way of conceptualizing and developing responses to these challenges. This is done by contrasting panpsychist conceptions of materiality and consciousness with those of vital materialism and property dualist historical materialism. It is argued that the latter theories have difficulties effectively analyzing the relationship between humans and the nonhuman world in the context of the Anthropocene. Hence, vital materialism tends to diminish human value and responsibility, while property dualist historical materialism tends to devalue and instrumentalize nature. Panpsychism is used as a basis for addressing these deficiencies. A key feature of this investigation concerns intrinsic value in nature and the argument that intrinsic value is dependent on consciousness.

Keywords panpsychism, vital materialism, historical materialism, intrinsic value, consciousness

Consciousness is often regarded as a uniquely human trait, setting us apart from the rest of nature. But what if consciousness permeates the world around us? Could this perspective offer hope for healing the deep estrangement between humanity and the natural environment as well as addressing the ecological crises that stem from it? This is the promise of panpsychism—the idea that consciousness is a fundamental and universal aspect of the natural world. By challenging and transcending the Cartesian dualism of mind and matter, panpsychism opens the door to a profound reevaluation of our values, offering a perspective that may be precisely what is needed in these critical times.

The article investigates the relevance of panpsychism to social theory's responses to the challenges of the Anthropocene. We contrast panpsychist conceptions of materiality and consciousness with those of vital materialism and a particular version of historical materialism. In the first section, the notions of consciousness and intrinsic value in nature are examined in the context of the environmental challenges of the Anthropocene. We argue that consciousness is integral and necessary for intrinsic value. We introduce contemporary panpsychism, then consider the vital materialism of Jane Bennett and the property dualist form of historical materialism of Andreas Malm.¹ We explicate the deficiencies of these theories for addressing ecological challenges. In different ways Malm and Bennett see how the more-than-human world is characterized as central to political responses to the Anthropocene. Even so, there are problematic elements in their characterizations. We argue that vital materialism tends to diminish human value and responsibility for ecological damage, while Malm's form of historical materialism tends to devalue and instrumentalize nature. We outline how panpsychism can address these deficiencies, arguing that panpsychism can provide a schema for recognizing the intrinsic value of nature and the nonhuman while also giving appropriate recognition to the value of humans and their responsibility for environmental damage.

The Anthropocene, the Nonhuman, Value, and Consciousness

Coming to terms with and addressing the challenges of the Anthropocene, the current human-dominated geological epoch, requires attention to contemporary ideas about the nonhuman, matter, and value.² The dominant characterization of matter in Eurocentric cultures in the past two centuries has construed it as dead, mechanistic, and without interiority. This devaluing of the nonhuman world is concomitant with an attitude that natural resources are there solely as a means for human ends.³ Pope Francis articulates the consequences of this characterization of the nonhuman world, writing that "if we no longer speak the language of fraternity and beauty in our relationship with the world, our attitude will be that of masters, consumers, ruthless exploiters, unable to set limits on their immediate needs."⁴ A lack of care for nature thus arises if the nonhuman is only valued for what it can do for humans, not for what it is in itself. The implication is that to improve the care of nature, humans need to not only value the nonhuman world for what it holds for humans, but also acknowledge that this world has value in itself, or intrinsic value.

The issue of intrinsic value in nature has been described as "the most critical and most recalcitrant theoretical problem of environmental ethics."⁵ Two highly significant

1. Bennett, *Vibrant Matter*; Malm, *Progress of This Storm*.

2. Crutzen, "Geology of Mankind."

3. Gare, *Nihilism Incorporated*; Merchant, *Death of Nature*; Skrbina, *Panpsychism in the West*.

4. Pope Francis, "Laudato Si," 11.

5. Callicott, cited in Vetlesen, *Denial of Nature*, 106.

formulations of intrinsic value in this field are those of Holmes Rolston III and J. Baird Callicott.⁶ Rolston argues that values can exist objectively in the natural world, independent from any conscious valuer. For Rolston, organisms that reproduce and are self-maintaining can be said to pursue their own ends and have intrinsic value, but so does the Earth itself, which sustains life. Callicott criticizes Rolston's position and argues that intrinsic value does not exist objectively in nature but is attributed by valuers, which are conscious subjects. He postulates that "all vertebrates, at the very least, are conscious and therefore may be said, in the widest sense of the term to value things."⁷

Frederick Ferré proposes a third position.⁸ He sides with Callicott in arguing that values require valuers, but he distinguishes between intrinsic values, which are what a valuer experiences as satisfying or good, and instrumental values, which "are valued because they contribute to or make possible the intrinsic values."⁹ Ferré argues that confusion arises when things that are valued for their own sake by humans are defined as intrinsically valuable. He argues that such things are more accurately described as being instrumentally valuable to the humans that value them. Ferré is not as restrictive as Callicott in terms of his inferences about which sort of entities can experience intrinsic values. As discussed further below, he argues for a form of panpsychism, with consciousness and therefore intrinsic value being distributed throughout the cosmos.¹⁰ He argues that intrinsic values are not all equal and can vary depending on matters such as their intensity, complexity, and intrinsic satisfactoriness.

Other philosophers concur with Ferré regarding the confusing ways intrinsic value has been defined and used. Although not in full agreement with Ferré's construal of intrinsic value, Kirk Robinson notes that intrinsic value is often misunderstood as "non-instrumental and non-monetary value that something has for a person or persons—something that is enjoyed for its own sake, like a sunset or dancing."¹¹ However, Robinson argues, this is not actually value that is intrinsic to the thing being valued at all, as it depends on a human valuer. David Keller concurs with Ferré and relates intrinsic value to the significance an entity has for itself, noting that that which has no mentality can have no intrinsic value.¹² David Ray Griffin, a prominent Whitehead-influenced philosopher, succinctly frames the matter in characterizing intrinsic value as "the value that something has in and for itself," making clear that the only things that are "for themselves are, of course, things with experience."¹³

While fully investigating this issue is beyond the scope of this article, the argument that something devoid of all consciousness cannot value, experience, or enjoy anything

6. Rolston, "Values in Nature and the Nature of Value"; Callicott, "Rolston on Intrinsic Values."

7. Callicott, "Rolston on Intrinsic Values," 132.

8. Ferré, *Being and Value*; Ferré, "Persons in Nature."

9. Ferré, "Persons in Nature," 159.

10. Ferré, *Being and Value*.

11. Robinson, "Beauty, Bioempathy and Ecological Ethics," 217.

12. Keller, *Ecology and Justice*, 54.

13. Griffin, *Whitehead's Radically Different Postmodern Philosophy*, 74.

and therefore has no intrinsic value is accepted here as valid and cogent. Hence, the conceptualization of intrinsic value used here is supported by the likes of Ferré, Keller, and Griffin. Consciousness is necessary for intrinsic value.

Before proceeding, some explanation is required on the usage of the term “consciousness.” In contemporary analytic philosophy of mind, the word is used to refer to phenomenal consciousness, which relates to what is felt and phenomenologically experienced. David Chalmers emphasizes that phenomenal consciousness can be distinguished from other aspects of the mind involved with information processing and cognitive functioning, although it may be associated with these things.¹⁴ Phenomenal consciousness is closely correlated with the colloquial term “feeling.” For instance, in everyday terms one could say that the difference between a human and a robot that mimics a human but has no phenomenal consciousness is that the robot does not feel anything. Examples of phenomenal consciousness include the felt aspect of sights, sounds, bodily sensations, mental imagery, thoughts, and emotions. Other words and phrases used to refer to phenomenal consciousness include qualia, subjectivity, experience, subjective experience, and “what it is like.”¹⁵ For this article, the word “consciousness” is used to refer to phenomenal consciousness.

Chalmers characterizes the problem of how phenomenal consciousness is related to or arises from the material brain as the “hard problem of consciousness.”¹⁶ This characterization has become a key feature of how the relation between mind and body is investigated in contemporary analytic philosophy.

Intractable difficulties with other approaches to resolving the hard problem of consciousness has led to increased philosophical attention to panpsychism, the view that consciousness is a fundamental and ubiquitous property of the natural world. While panpsychism was not regarded seriously by most philosophers for much of the twentieth century, there are an increasing number of journal articles and books on the topic.¹⁷ This resurgence of interest has occurred mostly among philosophers of mind working in the aforementioned tradition of analytic philosophy, which is the dominant contemporary philosophical tradition in the English-speaking world.¹⁸ Panpsychism is now regarded as a “well-respected albeit minority position” in analytic philosophy of mind.¹⁹ It resists other positions such as those that argue that first-person consciousness is illusory or does not exist in the way it is generally assumed to.²⁰

14. Chalmers, *Conscious Mind*, 26–28.

15. Chalmers, *Conscious Mind*, 6.

16. Chalmers, “Facing Up to the Problem of Consciousness.”

17. For example, recent edited collections include Skrbina, *Mind That Abides*; Brüntrup and Jaskolla, *Panpsychism*; and Seager, *Routledge Handbook of Panpsychism*.

18. Beaney, “What Is Analytic Philosophy?”

19. Goff, *Galileo’s Error*, 117.

20. See, for example, Churchland, *Matter and Consciousness*; Dennett, *Consciousness Explained*; Frankish, “Illusionism as a Theory of Consciousness.”

There are many ways panpsychism is conceptualized by contemporary philosophers, ranging from those who posit that the most fundamental elements that constitute matter at the subatomic level have conscious or protoconscious properties, to those who argue that the cosmos as a whole is a conscious subject.²¹ One of the main issues these theorists grapple with is how the emergence of human consciousness is related to preexisting forms of consciousness, whether these are at the subatomic or cosmic level. An example of panpsychism that posits consciousness at the cosmic level is the model of Freya Mathews.²² She argues that “the entire field of spatiotemporal existence in its totality” is a subjectival self, with other self-realizing systems existing within this field (such as humans) also having their own subjectivity.²³ An example of panpsychism that begins at the subatomic level is that of Galen Strawson, who argues that the most logical and parsimonious explanation for human consciousness entails that the most fundamental constituents of matter at the subatomic level have experiences of some sort.²⁴ Some models combine elements of both forms. For instance, Itay Shani argues that there is likely to be a universal consciousness in which other forms of consciousness, including a basic experientiality of matter’s fundamental constituents, are grounded.²⁵

It is important to note that although panpsychist philosophers contend that consciousness pervades the universe, this does not imply that any object or collection of objects has its own consciousness. Most contemporary panpsychists do not argue that things like toasters or rocks have distinct consciousness, with a distinction often made between individuals with consciousness and objects that are aggregates of such individuals. For instance, Griffin, who bases his account of panpsychism predominantly on Alfred North Whitehead’s work, argues that experiential and subjective unity is a feature of subatomic events at the most fundamental level, as well as entities with some degree of central coordination and control, which he refers to (using the terminology of Whitehead’s colleague Charles Hartshorne) as “compound individuals.”²⁶ Compound individuals include atoms, molecules, organelles, cells, and animals with a central nervous system. For Griffin, whether a particular type of entity could be postulated as being a compound individual with its own subjectivity is something to be considered based on empirical facts, behavioral observation, and reasonable inferences.

Contrasting Panpsychism with Vital Materialism and Historical Materialism

To assess the relevance of panpsychism to contemporary social theory and ecological challenges, it is apposite to bring it into dialogue with the ways other social theories

21. Nagasawa and Wager, “Panpsychism and Priority Cosmopsychism.”

22. Mathews, “Living Cosmos Panpsychism.”

23. Mathews, “Living Cosmos Panpsychism,” 136.

24. Strawson, “Realistic Monism.”

25. Shani, “Cosmopsychism.”

26. Griffin, *Unsnarling the World-Knot*.

address these challenges.²⁷ We do this by contrasting panpsychism with the vital materialism espoused by Jane Bennett in *Vibrant Matter* and the historical materialism put forth by Andreas Malm in *The Progress of This Storm*. These theories focus on materiality and material processes, which are intimately related to conceptions concerning consciousness. Malm's and Bennett's works pay attention to agency, which is arguably closely connected with consciousness. While Malm's theory does not specifically articulate or discuss the concept of intrinsic value in nature, it is pertinent for drawing out the ramifications of the conception of intrinsic value used here, in which the latter is dependent on consciousness. His book also contains some cogent criticisms of aspects of Bennett's work. A further reason for their selection is that both Malm and Bennett regard human responses to the Anthropocene as a central philosophical and political challenge of our times. The examination in the next two sections involves considering how these authors conceptualize notions such as agency, intentionality, responsibility, intrinsic value, and consciousness.

Vital Materialism and Agency

Central to vital materialism is the notion of distributive agency, a conception that Bennett derives from Bruno Latour.²⁸ For Latour, anything that modifies a state of affairs by making a difference is an actant and has agency.²⁹ Although intentionality is not denied for human agency, it is not required for agency generally speaking. Bennett builds on Latour's characterization of nonhuman agency to propose that material things have the capacity "not only to block the will and designs of humans but also to act as quasi agents with trajectories, propensities or tendencies of their own."³⁰ This leads her to the notion of thing-power, the capacity of things to affect other bodies, and to the assertion that there is a vitality intrinsic to materiality that overcomes mechanistic conceptions of matter.³¹ In explicating these conceptions in her investigations of human and nonhuman actants, Bennett brackets the issue of subjectivity on the grounds that discerning where subjectivity begins and ends is an "aporetic or quixotic endeavor" that "is too often bound up with fantasies of a human uniqueness in the eyes of God, of escape from materiality, or of mastery over nature."³² Her application of Latour's conception of agency allows her to characterize matter as agentic without also needing to bring in issues with subjectivity.

Malm criticizes vital materialism's notion of agency on two main grounds. First, he critiques the idea that agency can be severed from conceptions of intentionality and

27. There have been few in-depth studies relating contemporary panpsychism to social theory. Two major works that address panpsychism are those of Wendt, *Quantum Mind and Social Science* and Vetlesen, *Cosmologies of the Anthropocene*.

28. Bennett, *Vibrant Matter*, ix.

29. Latour, *Reassembling the Social*, 71.

30. Bennett, *Vibrant Matter*, viii.

31. Bennett, *Vibrant Matter*, 3.

32. Bennett, *Vibrant Matter*, ix.

mentality. He notes that for contemporary philosophers in the field of philosophy of action, having a mind and acting intentionally are inextricably connected with agency.³³ The implication of severing intentionality from agency for environmental politics, Malm argues, is that the notion of “responsibility—so critical for climate politics—is toned down or turned off.”³⁴

Malm’s other main criticism of vital materialism’s conception of agency relates to unintended consequences. He argues that distributing agency across a number of actants means that the actions of humans can only be attributed to them when they have intended consequences. The implication of this is that things like the environmental effects of negligent actions cannot be attributed to humans, because it was not the exercise of human agency that caused those effects.³⁵ Hence, Malm contends that attributing agency to any entity implicated in a series of events has the effect that the “notion of ‘unintended consequences’—so critical for all issues of ecological crisis—here crumbles away.”³⁶

Other critics of Bennett’s vital materialism have emphasized that it devalues the significance of humans. Arne Vetlesen argues that Bennett, along with Latour, by using the notion of distributive agency to counter the view that humans are radically different from other beings end up “neglecting what is peculiar about us as one species among many.”³⁷ Bennett acknowledges that her project “strategically elides what is commonly taken as distinctive or even unique about humans” and aims to characterize “the relationship between persons and other materialities more horizontally.”³⁸ This characterization of humans as being on the same level as nonhuman entities entails a depreciation of the human. Alexander Wendt notes that treating rocks as being on a continuum of agency with people might result in people being treated like rocks.³⁹ Similarly, Cat Moir argues that the most problematic aspect of vital materialism is the elision of the difference between living and nonliving entities. If there is practically no difference between the agency of humans and plastic bags, Moir asks, “how can one argue that it is unacceptable to treat human bodies in the same way one disposes of litter?”⁴⁰

A further criticism of vital materialism is the lack of interrogation of the historical and economic conditions that generate abstractions and conceptions of materiality.⁴¹ Thus, Paul Rekret contends that Bennett locates the dualism between mind and the world in an “ethically flawed exercise of human hubris,” using an approach that assumes

33. Malm, *Progress of This Storm*, 84–85.

34. Malm, *Progress of This Storm*, 111.

35. Malm, *Progress of This Storm*, 93–94.

36. Malm, *Progress of This Storm*, 94.

37. Vetlesen, *Cosmologies of the Anthropocene*, 250.

38. Bennett, *Vibrant Matter*, ix, 10.

39. Wendt, *Quantum Mind and Social Science*, 147.

40. Moir, *Ernst Bloch’s Speculative Materialism*, 148.

41. Rekret, “Head, the Hand, and Matter.”

a purity of thought that can investigate itself free of the social conditions that mediate it.⁴² In turn, Rekret argues, this approach leads to theorizing that prioritizes description over explanation, deters investigation of areas of political contestation, and “risks soothing us into inaction.”⁴³ Similarly, Anton Syutkin characterizes vital materialism as politically quiescent, laying emphasis on the self-care of multiple mini-subjects rather than on a project of world transformation. He asserts that vital materialism, like other forms of new materialism, “merely describes the world, but does not change it.”⁴⁴

Bennett anticipates some of these criticisms to some extent. For example, in relation to the potential for vital materialism to diminish human responsibility, she argues that while vital materialism does “attenuate the blame game” to some extent, this does not imply abandoning locating human sources of harm and redressing them or attributing singular blame to human individuals or groups in some circumstances.⁴⁵ Her responses to vital materialism’s potential to devalue humans include contending that vital materialism does not eliminate all differences but examines “affinities across these differences,” that members of a species identify with each other because they have similar bodies, and that “my conatus will not let me ‘horizontalize’ the world completely.”⁴⁶ Although such defenses may go some way toward ameliorating the potential of vital materialism to diminish human responsibility and value, they are not implicit or immanent in its core tenets. Hence, these potentials remain problematic.

Property Dualist Historical Materialism

In opposition to vital materialism and related theories and their attendant problems with grappling with our ecological predicaments, Malm turns to alternative ways to account for the relations between mentality, intentionality, and agency. He rejects Cartesian substance dualism, in which mind and matter are conceived as two separate substances, because of its notorious problems in explaining the interaction between mind and body.⁴⁷ Instead, he advocates for substance monism and property dualism. This position entails that there is only one substance in nature—matter, from which both human and nonhuman entities are made. This substance has physical properties and mental properties. For Malm “the brain is the seat of all mental occurrences,” so there is a strong distinction between humans (and other animals with brains) and the rest of nature, which does not have any mental properties.⁴⁸ He argues that although the brain and the body are the bearer of mental properties, such properties “cannot themselves be reduced to sheer materiality or equated with physical components.”⁴⁹ Thus, although

42. Rekret, “Head, the Hand, and Matter,” 59.

43. Rekret, “Head, the Hand, and Matter,” 61.

44. Syutkin, “Gilles Deleuze Among the New Materialists,” 401.

45. Bennett, *Vibrant Matter*, 37.

46. Bennett, *Vibrant Matter*, 104.

47. Malm, *Progress of This Storm*, 52–56.

48. Malm, *Progress of This Storm*, 55, 164.

49. Malm, *Progress of This Storm*, 57.

both nature and society are material, “the one cannot be equated with the other” because humans also have the property of mind.⁵⁰ Malm presents property dualism as an alternative to both Cartesian substance dualism and the hybridism of Bennett and others, which collapses the distinction between the human and the nonhuman.

Extending his discussion to the social realm, Malm presents historical materialism as a form of property dualism that distinguishes between natural and social properties. He characterizes social properties as an example of emergence, which plays an important role in his schema.⁵¹ Emergent properties arise from a system as a result of the organization of its parts. The emergent properties can have causal effects back on the system and on the rest of the world. Hence, emergent properties mean that a whole may be more than merely the sum of its parts, although they nonetheless still depend on the complex relations between parts. Malm contrasts this conception of emergence with the hybridism of Latour and Bennett, asserting that “this view of the world is the very antithesis of hybridism, with its urge to flatten ontological hierarchies and efface distinctions.”⁵² He argues that the concepts of emergence and property dualism about nature and society are necessary for maintaining a distinction between social processes that are subject to human intervention and natural processes that are not the result of human agency.⁵³

Malm’s account of historical materialism as property dualism can be criticized on philosophical and politico-ecological grounds. Foremost among these is the issue of how mental properties can interact with physical properties, which is similar to the problem in substance dualism of how different substances could interact. Although various solutions to the interaction problem for property dualism have been proposed—from mental and physical properties being interdependent and jointly efficacious to the existence of “psychophysical laws” mediating interactions between the mental and the physical—Malm acknowledges that a satisfactory solution to this issue has yet to be found. Even so, he argues that the ability of the mind to affect the body suggests that a solution must exist. He contends that intentional action strongly indicates that “mental properties can have causal impact on bodies, even if we do not yet know exactly how they go about doing it.”⁵⁴ While Malm envisages that there must be a solution for the problem of causal interaction between the physical and the mental for property dualism, because the mind can influence the body, a reasonable solution may entail a radical revision of his position that mental properties are only associated with the brain and body.

Malm credits William Lycan with providing a clear statement of the causal interaction problem for property dualism.⁵⁵ Yet Lycan also argues (in a different work than that cited by Malm) that while all forms of dualism have problems, the best type of dualism

50. Malm, *Progress of This Storm*, 57.

51. Malm, *Progress of This Storm*, 67–72.

52. Malm, *Progress of This Storm*, 71.

53. Malm, *Progress of This Storm*, 71–72.

54. Malm, *Progress of This Storm*, 64.

55. Malm, *Progress of This Storm*, 64.

would be a form of panpsychism.⁵⁶ He reluctantly reaches this conclusion on the grounds that if mental properties are fundamental properties of nature then it is likely that, like other natural properties, they are spread throughout nature rather than occurring “only in regions of space-time shaped liked heads of sentient creatures or be specific to neural tissue.”⁵⁷ Furthermore, while Malm argues that there is no magic in the conception of emergence, others argue that the purported emergence of mental properties from a purely material brain does amount to a miracle or a form of magic.⁵⁸ There are strong arguments that can be made on purely philosophical grounds against those forms of property dualism that ascribe mental properties as necessarily being associated with brains, as Malm does.

Malm’s characterization of historical materialism as property dualism also arguably remains in the tradition of Marxism for which, as Joel Kovel phrases it, there is a “foreshortening of the intrinsic value of nature.”⁵⁹ This foreshortening entails that nature is characterized in a predominantly instrumental way, rather than being valuable in and for itself. In light of the discussion of intrinsic value, it is evident that by restricting consciousness to humans and other animals with brains, the notion of intrinsic value in nature as it is being used here is restricted to these types of entities. Malm’s property dualism thus undervalues the rest of nature.

To illustrate this point, we make reference to Malm’s description of Carolyn Merchant’s work *The Death of Nature: Women, Ecology and the Scientific Revolution* as “the greatest classic of Marxist ecological feminism.”⁶⁰ In this book, Merchant traces how the historical transition to capitalist property relations was accompanied by a shift from the conception of nature as organic and living to, as Malm puts it, “one of nature as a dead, inert object to be manipulated and controlled with maximum efficiency.”⁶¹ Yet it is hard to imagine how Malm’s property dualism can avoid a similar characterization of nature as dead and inert. If, as Malm attests, the brain is the bearer of mental properties, then the rest of nature is devoid of such properties. This lack applies to emergent features of nature as well (other than emergent features associated with the brain). Thus, a consequence of Malm’s correlation of mental properties with brain properties is that it reinforces the dead, inert view of nature that Merchant associates with the rise of capitalism. The property dualism of Malm does not ameliorate the tendencies of some forms of Marxism, as explained by Kovel and others, to devalue nature and conceive of it in an instrumentalist way. Similar criticisms are made of Malm’s approach by reviewers such as Michael Kleinod and Serpil Opperman.⁶² Opperman asserts that Malm’s approach is

56. Lycan, “Recent Naturalistic Dualisms.”

57. Lycan, “Recent Naturalistic Dualisms,” 357.

58. Malm, *Progress of This Storm*, 68; Griffin, *Unsnarling the World-Knot*, 63–76; Strawson, “Realistic Monism.”

59. Kovel, *Enemy of Nature*, 232.

60. Malm, *Progress of This Storm*, 183.

61. Malm, *Progress of This Storm*, 183.

62. Kleinod, “Crossing a Twister”; Opperman, “Book Review.”

grounded in the same type of characterization of the world on which “anthropocentric conceptions which underwrote the destruction of nature” are based.⁶³

We can conclude that the property dualism of Malm and his efforts to avoid the deficiencies of Bennett’s vital materialism in addressing the challenges of the Anthropocene are hampered by how he characterizes the relations between consciousness and nature. In our view, what’s required to respond to the challenges of the Anthropocene is a recognition of the intrinsic value of the more-than-human world and the capacity to assume responsibility for it. Renewing concerns with consciousness is central to this project, or more precisely a reconfiguration of how we understand where it resides—and this is what panpsychism offers.

Resolving the Deficiencies of Vital Materialism and Property Dualist Historical Materialism with Panpsychism

If Malm and others have correctly identified problems with Bennett’s vital materialism and its characterization of the relation between mind, matter, and agency in dealing with contemporary ecological challenges, but Malm’s own alternative has also been found wanting, then alternative solutions must be sought. Here panpsychism may offer some promise. The problems of vital materialism in diminishing human responsibility and value and those of Malm’s property dualism in devaluing nature can be framed as problems arising from how they deal with the relation between consciousness and nature. The radical unsettling of how this relation is conceived by panpsychism might assist in resolving these problems.

The contrast between panpsychism and vital materialism can be demonstrated by attention to a detailed illustrative example from Bennett, in which she applies her conception of distributive agency.⁶⁴ The example is about a power grid failure in North America in 2003 that affected some 50 million people. Bennett analyzes the power grid as an agentic assemblage of an abundance of different actants, such as “coal, sweat, electromagnetic fields, computer programs, electron streams, profit motives, heat, lifestyles, nuclear fuel, plastic, fantasies of mastery, static, legislation, water, economic theory, wire, and wood.”⁶⁵ The blackout was the result of a cascade of events of “voltage collapses, self-protective withdrawals from the grid, and human decisions and omissions.”⁶⁶ She notes that a contributing factor was legislative change that encouraged the long-distance trading of electricity but undermined grid stability.⁶⁷ However, Bennett demurs from assigning blame to officials, directors, traders, or legislators on the basis that the multitude of actants involved entails that “autonomy and strong responsibility seem to me to be empirically false, and thus their invocation seems tinged with injustice.”⁶⁸

63. Opperman, “Book Review,” 148.

64. Bennett, *Vibrant Matter*, 20–38.

65. Bennett, *Vibrant Matter*, 25.

66. Bennett, *Vibrant Matter*, 25.

67. Bennett, *Vibrant Matter*, 26–27.

68. Bennett, *Vibrant Matter*, 37.

Conceptualizing the blackout from a panpsychist perspective yields different conclusions regarding human responsibility. As described, a distinction can be made in panpsychism between compound individuals and objects that are aggregates of individuals, with no agency of their own. In the case of the power grid failure, such aggregates would include the electrical lines, poles, plant, and other physical infrastructure that make up the power grid. While the individual atoms from which these objects are composed would have basic elements of subjectivity and intentionality in this form of panpsychism, the objects themselves do not act intentionally. Furthermore, as Whitehead frames it, the influence of individual atoms in objects that are aggregates is “predominantly of a formal character expressible in formal sciences, such as mathematics. The inorganic is dominated by the average. It lacks individual expression in its parts. Their flashes of selection (if any) are sporadic and ineffective. Its parts merely transmit average expressions.”⁶⁹ Thus, the behavior of these physical objects can be accounted for by disciplines such as engineering and physics, for which it is not necessary to consider issues of intention and purpose.⁷⁰

In contrast, the humans who made decisions regarding the power grid are compound individuals with a vastly greater degree of freedom than the atoms forming the physical infrastructure of the electricity network. While the behavior of the physical objects that contributed to the power failure were dictated by the laws of physics—so these objects could not be said to be exercising intentional agency or be held responsible for the blackout—the humans who made decisions that contributed to the power failure did exercise such agency and could be held responsible. A panpsychist model is therefore able to effectively assign responsibility to humans. Panpsychism can address concerns of those such as Malm, for whom divorcing agency from intentionality “evacuates the world of recklessness, improvidence, liability, responsibility and a whole range of other parameters.”⁷¹

In relation to the issue of human devaluation, Bennett asserts that the flat ontology of vital materialism is one of its advantages over traditional environmentalism, because this avoids anthropocentric conceptions such as those that place humans at the pinnacle of a great chain of being, but it also has the potential to place humans on the same level of value as inanimate objects. This ontological flatness is arguably as much to the detriment of vital materialism as it is a benefit. In contrast, while panpsychism does not class humans as being on an ontologically different level from other entities, it can (depending on the particulars of the model used) ascribe higher value to humans over other entities. For example, for Ferré, as for Whitehead, occasions of experience of varying levels of intensity and complexity make up the cosmos. The intrinsic value of these occasions, from the most basic pulsations of energy at the subatomic level to the

69. Whitehead, *Modes of Thought*, 27.

70. Griffin, *Unsnarling the World-Knot*, 187–88.

71. Malm, *Progress of This Storm*, 95.

deepest intensities of human experience such as the appreciation of art and music, varies according to the degree of subjective satisfaction they achieve.⁷² Thus, under this version of panpsychism, because humans have a much richer, complex, and developed degree of consciousness than the entities that make up inanimate objects, it can be said that humans have more intrinsic value than inanimate objects. Panpsychism is thereby able to overcome the human/nonhuman dualism that vital materialism critiques without concomitantly depreciating the value of humans.

The problem with the value of the nonhuman for Malm's property dualism is the opposite of that entailed by vital materialism. The flat ontology of vital materialism results in a diminishment of value of the human; conversely, in Malm's property dualism, the nonhuman is devalued. In terms of the characterization of intrinsic value, Malm's property dualism entails that the only entities with intrinsic value are creatures with brains. As discussed, this does not engender respect or care for the rest of nature and other sorts of living beings, and it is aligned with the instrumentalization of the natural world that is one of the underlying causes of environmental damage.

This problem can be ameliorated by the panpsychist attribution of consciousness as a property distributed throughout nature that reaches its most highly developed and creative forms in humans. This allows for nonhumans' intrinsic value to be recognized, acknowledged, and acted on through environmental protections, without depreciating humans to the same level as inanimate objects. Thus, panpsychism is better equipped than Malm's property dualism to facilitate attitudes toward nature that are likely to be more effective in addressing Anthropocene challenges.

Conclusion

Although it may initially seem to be a strange and unfamiliar way of understanding the world, panpsychism is a view that has gained currency in contemporary philosophy and warrants more attention from social theorists. This article attempted to demonstrate this proposition by bringing panpsychism into dialogue with vital materialism and property dualist historical materialism. We showed that by positing consciousness as a fundamental and ubiquitous feature of the world and as integral to conceptions of intrinsic value, panpsychism has the potential to more effectively address the challenges of the Anthropocene than these two theories.

Through attention to conceptions of agency, intentionality, responsibility, value, and consciousness, we critiqued the capacity of Bennett's vital materialism and Malm's property dualist version of historical materialism to address environmental challenges. Vital materialism assigns agency everywhere but elides the link of agency with intentionality and consciousness. Because of this, there is nothing integrally special about human beings for the vital materialist, and the value of human life and the responsibility of humans for environmental damage are attenuated. On the other hand, Malm's

72. Ferré, *Being and Value*, 360–61.

property dualism maintains the links between agency, intentionality, and consciousness and does not minimize the uniqueness of humans or their responsibility for their actions. It does so through conserving the dualism between the human and the nonhuman that vital materialism has repudiated. Consequently, this form of historical materialism tends toward an instrumentalist, anthropocentric view of nature. Thus, both vital materialism and Malm's version of historical materialism have some advantages for addressing the challenges of the Anthropocene, but they fall short in other respects.

These deficiencies could potentially be rectified by adopting a panpsychist approach. With panpsychism, as it has been applied here, the link between agency, intentionality, and consciousness is preserved, but the dichotomy between the human and the nonhuman is eliminated. At the same time, overcoming this dichotomy preserves the uniqueness, responsibility, and intrinsic value of the human. Panpsychism posits consciousness everywhere but acknowledges that human consciousness is a highly developed and special form of consciousness with high intrinsic value, though not of a different ontological kind from other forms of consciousness. Thus, panpsychism has the potential to mitigate the deficiencies of both vital materialism and property dualist historical materialism by providing a rationale for balancing the value of human and nonhuman entities and appropriately assigning human responsibility. By preserving the positive aspects of Bennett's and Malm's perspectives on the human and the nonhuman while mitigating the negatives, panpsychism might facilitate the development of theory that is more ecologically aligned and more attuned to overcoming the alienation of humans from nature.

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Acknowledgments

This article was made possible thanks to the support of the Institute for Culture and Society, Western Sydney University.

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