

Wild Nature and the Pseudo–Problem of Human/Nature Dualism

Paul Keeling*

The distinction between human works and nature that wilderness protection requires is often accused of covertly assuming human/nature ontological dualism. This charge arises from a linguistic confusion. Word pairs with a dual inclusion/contrast relationship (vertical polysemy) present special theoretical difficulties but are common and philosophically unproblematic. Examples include *cow/bull*, *finger/thumb*, *shoe/boot*, and *animal/human*, where the first term has a superordinate sense that categorically includes the second term, and a subordinate sense that contrasts with it. The linguistic analysis of nature as a vertical polyseme (not merely ambiguous) both explains and dispels the illusion of dualism, and reconciles the judgment that wild nature is valuable with the judgment that humans are part of nature. Human/nature dualism is a pseudo-problem for wilderness that does not need to be corrected or overcome. In fact, we need to recognize ontological “continuity-with-difference” (Ouderkirk 2003) to understand our place in nature.

1. Wilderness and the Charge of Human/Nature Dualism

In all of environmental philosophy there is probably no single argument that is as vexing as it is repeated, which J. Baird Callicott states as follows:

Since Darwin’s origin of Species and Descent of Man we have known that man is a part of nature...If man is a natural, a wild, an evolving species, not essentially

* Paul Keeling is an independent scholar with two degrees in Philosophy (BA UC Berkeley, 1991, MSc University of Edinburgh, 2004) who has been published in *Environmental Ethics*, *Environmental Values*, and the *International Journal of Wilderness*. He also has written for various magazines and newspapers, including *Sierra*, *Orion*, *Earth Island Journal*, *Philosophy Now*, *Tyee*, and *Globe and Mail*. His areas of interest include wilderness, environmental ethics, philosophy of language, and philosophy of technology. The author is grateful to Marcus Weigelt, Tara Ivanochko, and two anonymous reviewers for helpful comments on earlier drafts of this paper. Special thanks to Eric Keeling for many exploratory conversations over many years about, and sometimes in, wilderness. Email <paul@keeling-mail.com>

different in this respect from all others...then the works of man, however precocious, are as natural as those of beavers, or termites, or any other species that dramatically modify their habitats. (1998b: 350)

This argument is vexing because most people who claim to care about nature would probably agree—and often point out—humans are a part of it. But the loss of nature has been a central motivating concern of the environmental movement and a cornerstone of conservationist policies based on the recognition that the naturalness of a landscape is a value-adding property (Elliot 1997). If Callicott's argument is accepted, then it seems there is no valid distinction between human works and what is natural, thus rendering meaningless the notions of caring about nature and wanting to protect it. We can cover a wetland with a parking lot and the area will be no less natural.

Appreciation for nature apart from humans and concern for its disappearance produced a 20th century “wilderness” preservation movement in North America (Nash 1967, Sutter 2002, Woods 2017: 21–37), an idea that has influenced global conservation efforts (e.g., see Watson et al. 2018). But for more than three decades now the idea of wilderness has been subject to substantial “revisiting” and “rethinking” (Callicott and Nelson 1998, 2008, Woods 2017, Peterson and Hultgren 2020). A protected wilderness area is a place legally set aside from human development and transformation, free from human manipulation, management, and control. Section 2(c) of the U.S. Wilderness Act of 1964 (widely regarded as the paradigm exemplar of the wilderness idea) defines wilderness as

...an area of undeveloped Federal land retaining its primeval character and influence, without permanent improvements or human habitation, which is protected and managed so as to preserve its natural conditions and which generally appears to have been affected primarily by the forces of nature, with the imprint of man's work substantially unnoticeable. (Callicott and Nelson 1998: 121)

The legal protection of wilderness thus presupposes a conceptual distinction between human works and the forces of nature. It is often alleged this distinction assumes human/nature ontological dualism—the view that humans are in some way or to some degree transcendent to nature, not fully natural.¹ Callicott (Callicott and Nelson 1998: 8) has argued “the [wilderness] concept perpetuates the pre-Darwinian metaphysical dichotomy between ‘man’ and nature...” Cronon (1998: 484) states that the “central paradox” of wilderness is that it “embodies a dualistic vision in which the human is entirely outside the natural...by definition wilderness leaves no place for human beings...” This critique began to influence conversations about protected area stewardship policy as early as 2007 when an interdisciplinary panel of experts was convened to “rethink” the concepts of nature and naturalness for U.S. park and wilderness stewardship in an era of global change. In the resulting book titled (suggestively enough) *Beyond Naturalness*, Aplet and Cole (2010: 26) concluded “it is time to articulate goals and objectives for parks and wilderness that are founded in a perspective that views humans as a part of, rather than apart from, nature,” which expresses the belief that parks and wilderness have assumed human/nature dualism.² This is now a common refrain both inside and outside of academia.

I acknowledge that the idea of wild nature assumes a conceptual distinction between human works and nature. I also acknowledge that human/nature dualism runs through much of the Western historical tradition, and has contributed to an exploitive

¹ For expedience I shall use the shorter expression “human/nature dualism” throughout this paper.

² In practical policy terms such rethinking of wilderness might justify less wilderness designation and more active human management and intervention in existing wilderness areas, deprioritizing the wilderness goal of protecting “areas that are so managed as to be left unmanaged” (Zahniser 1956).

and destructive attitude toward nature (White 1967, Hayward 1994: 16, 17, 30, Woods 2017: 46–48). It is also true that some who defend wild nature endorse some version of human/nature dualism, or appear to do so (e.g., see, Elliot 1997: 116–130, Katz 1997: 121–132, Lee 2005: 54–58). I contend, however, that the distinction between human works and nature does not require or assume human/nature dualism. Those who invoke the Darwinian fact of human naturalness as a basis for criticizing the idea of wilderness, which Woods (2017: 39–64) refers to as the “naturalist argument against wilderness,” are therefore conjuring a pseudo-problem. This is not to say Darwinian naturalism is a pseudo-problem. It is a profound fact that humans evolved through the same biological processes as all other species and are thus kin to all life on earth. It is also a profound fact that even the most advanced and sophisticated human technologies such as Artificial Intelligence or nanotechnology share a common ontological continuity with the structural creations (beaver dams, bird nests, etc.) of other life forms. But the idea of wild nature is not at odds with these facts. I will show that human/nature dualism is a pseudo-problem for wild nature and its legal protection as wilderness. It is important to first explain why standard responses to the so-called “problem” have failed to get rid of it.

2. Standard Responses and the Persistence of the Dualism Pseudo-Problem

A tempting rebuttal to the allegation that wilderness protection is fundamentally human/nature dualist is to consult the historical writings and sayings of prominent wilderness proponents. It is in fact difficult to find one who does not think humans are a part of nature. In the opening passage of *Walking*, Henry David Thoreau (1914: 3) regards “man as an inhabitant, or a part and parcel of Nature.” John Muir (1911) believed “we all travel the Milky Way together, trees and men” (256) and that humans are made from the “same material” as all other creatures, who are our “earth-born

companions and fellow mortals” (Muir 1916: 139).³ Aldo Leopold (1966) saw the land as “a community to which we belong” (xviii) and the Wilderness Society as espousing “an intelligent humility towards man’s place in nature” (Kaye 2007: 9). Sigurd Olson saw wilderness as providing man with a “sense of close relationship, belonging, and animal oneness with the earth and the life around him” (Kaye 2007: 9). William O. Douglas wrote “the wilderness somehow gives man a sense of unity that he gets nowhere else—a feeling of belonging to the earth and being an important part of existence” (Brower 1961: 13), Ansel Adams declared “man must affirm his spiritual kinship with the eternity of Nature” (59), and Joseph Wood Krutch that “man is not an island in respect to nature as a whole” (71). Perhaps most significantly, because he chiefly authored the definition of wilderness enshrined in the U.S. Wilderness Act quoted above, Howard Zahniser (1955) thought wilderness denoted a place “where man himself is a member of the natural community.” What is perhaps most striking about these quotations is the outdated use (by a lot of men) of the term “man” to denote all of humanity. (This observation is relevant to my argument and will be taken up in section 3). But there is no hint of human/nature dualism here.

Merely quoting wilderness proponents does not settle the matter, however. The charge is that wilderness proponents are all speaking out of both sides of their mouth. They are engaged in a kind of double-think, unaware they are expressing and espousing human/nature dualism. Colwell (1987:100; emphasis in original), noting “deep ecologists *claim* that humans are a part of nature, but their interpretation of what that

³ John Muir is rather a special case. Deeply religious, he viewed nature and *Homo sapiens* as “God’s creation,” which is explicitly anti-Darwinian. However, he did not on that account posit an ontological dualism between humans and the rest of nature, but rather held a holistic view in which the totality of nature reflects the divine spirit, a view arguably more characteristic of ancient pagan animism.

means involves keeping humans out of or apart from nature,” calls this “inadvertent dualism.” Vogel (2002: 25) refers to human/nature dualism as a “subterranean” commitment among many environmental thinkers. On this view, just as ordinary language can be sexist or racist even though the speaker does not intend it to be, so it can also be human/nature dualist.

The common-sense response to the charge of inadvertent human/nature dualism is to say “it depends on what you mean by natural.” It is thought that environmental discourse about valuing and protecting wild nature is compatible with Darwinian naturalism because the word “nature” is ambiguous as between two different, ordinary meanings. We typically say humans are natural in the sense that they are products of Darwinian evolution like all other living things, but human works are not natural in the sense that they are the products of culture. This allows us to acknowledge humans are a product of nature in one sense, while also distinguishing the Arctic National Wildlife Refuge in Alaska from New York City, based on the extent to which the area in question and its constituent elements are modified by human culture and technology (Elliot 1997). Environmental thinkers have variously articulated this concept of nature as autonomous (Heyd 2005), unmanipulated and uncontrolled (Katz 1997), independent of problematic instrumentalization (Stephens 2000, Scoville 2023), other than human (Hailwood 2000), separate and apart from humans (Mckibben 1989), and wild (Rolston 1998). Although these views of nature are not identical, what unites them is a conceptual distinction between human agency and other kinds of agency, such as that of nonhuman animals, plants, geophysical forces, etc. In this sense it is clearly false that human-built hydroelectric dams are “as natural as” beaver dams. Beavers build dams by cutting down trees and branches with their teeth, dragging them to water, piling them up with other local material such as mud and grass, and making a burrow in it. Their dam-

building remains rooted within local ecological and biological forces, and the derivative materials (e.g., wood) remain relatively unaltered from their original state and local context. A hydroelectric dam, on the other hand, involves non-local and synthesized materials, such as steel and concrete, and involves thousands of people rooted in economic, political, and sociological forces as well as ecological and biological ones. Note the two dam-making activities are mutually impossible for the two species in question: no beavers have been observed holding board meetings or drawing up engineering plans, and no human being has been observed cutting down a tree with their teeth. But human distinctiveness is itself a result of natural processes (Woods 2017: 52–64).⁴ We are simply using the word “nature” (natural) in two different ways.

Appealing to different senses of nature does not really dispense with the charge of inadvertent human/nature dualism, however. To the contrary, it tends to fuel the suspicion. The problem is nature₁ and nature₂ are not mere homonyms with wholly separate meanings; the two senses are clearly tightly related. As John Stuart Mill famously observed in his 1874 essay “Nature,” there are two common senses of “nature”—the first that includes human “voluntary and intentional agency” and the second that excludes it—that are “sufficiently allied so as to admit of confusion” (Mill 1961: 445). Linguists call this kind of ambiguity between closely related word-meanings *polysemy*. When John Muir says, “Keep close to Nature's heart, yourself; and

⁴ Woods calls this “natural human distinctiveness.” By this expression Woods does not mean human exceptionalism, the view that humans have special entitlement to subjugate and exploit the biosphere without limit. Human “distinction” here does not denote an elevated rank or status *vis à vis* nature, but refers to the qualitative difference between human cognitive capacities and those of all other species. I also would point out an important corollary, that humans are the only species capable of knowing they are a part of nature and hence capable of modifying their behavior on the basis of that knowledge.

break clear away, once in a while, and climb a mountain or spend a week in the woods” (Young 1915: 216), the word “Nature” could be read as nature₁ or nature₂, or even both simultaneously; we deepen our sense of belonging to the cosmological, evolutionary, and biological order of things (nature₁) by “breaking away” from the trappings of culture and “spending a week in the woods” (nature₂). The worry is that the natural/cultural distinction is really just a nonreligious version of the natural/supernatural distinction. In the Western historical tradition, human culture has been accounted for by the unique presence of a spirit or immortal soul, which was thought to be of supernatural origin, a belief that has been passed down from the Judeo-Christian doctrine of *imago dei* (humans uniquely “made in the image of God”) and the mind-body ontological dualism of Descartes. This doctrine has been historically interpreted in the West as “man’s effective monopoly on spirit,” uniquely imbuing humans with divine agency and divesting nature of its animist, spiritual qualities (White 1967: 1205). When we say a beaver dam is natural and the Hoover Dam is not, we are (the argument goes) implicitly denying the beaver dam is a supernatural dam produced by the Godly force of human culture. The distinction is just a relic of the outmoded ontologically dualist belief that human culture is the result of God’s special spiritual intervention in the creation of humans, rather than a product of spiritless nature.

Moriarty (2007) has defended the nature/culture distinction along the following lines: if nature₂ is defined as that which is not the product of culture, and culture can be analysed explicitly in terms of nature₁ such that it requires no reference to a supernatural, nature-transcending soul or spirit, then the “analogical relation” (234–237) between the nature/culture distinction and the natural/supernatural distinction can be severed. Moriarty maintains that culture can be defined as information transmitted nongenetically and distinguished from nature, which involves information transmitted

genetically. Both modes of information transfer are products of evolution and thus remain on the natural side of the natural/supernatural distinction; the idea that humans transmit information nongenetically certainly need not imply the information is transmitted supernaturally, i.e., outside the laws of nature. Because this account of culture requires no reference to a supernatural entity or property, the products of human culture can be distinguished from nature without assuming human/nature dualism.

Moriarty's account seems straightforward enough, but fifteen years earlier Rolston made virtually the same argument and was upbraided by Callicott. Rolston wrote:

There is nothing unscientific or non-Darwinian about the claim that innovations in human culture make it radically different from wild nature...Information in wild nature travels intergenerationally on genes, information in culture travels neurally as persons are educated into transmissible cultures...Little or nothing in wild nature approaches this. (1998: 368)

Callicott responded by saying:

...Culture serves Rolston as a secular surrogate for the image of God cleanly segregating man from nature. The crux of the debate between us concerns the relation of culture to nature. I follow Darwin in thinking that human culture is continuous with primate and mammalian culture and that, no matter how hypertrophic it may lately have become, contemporary civilization remains embedded in nature. (1998a: 388)

Callicott identifies two problems, here. First, some animals pass on non-genetic information to their offspring, and thus could be said to exhibit culture.⁵ Moreover, we

⁵ Moriarty briefly addresses this point, but mostly dismisses it as “not central” to his argument.

He goes on to say, “if someone would prefer to define nature in opposition to all culture (human and nonhuman) I have no objection” (2007: 239). But this seems to unnecessarily attenuate his case. No competent English speaker would ever actually *say* the products of

cannot say that nothing in nature exhibits anything like human culture unless we have already decided, *contra* Darwin, humans are not a part of nature. Human activity such as recycling sequestered carbon, says Callicott (1996: 371), may be “biologically unique,” but “it is not unnatural.”

Vogel is similarly intransigent on this point. Any suggestion that human agency is not natural, according to Vogel (2003: 153), is a “tip-off that we’ve entered Cartesian [i.e., ontologically dualist] territory” (see also Vogel 2002: 25). Vogel characterizes this territory as a pre-Darwinian, mind/body dualism that places the ontological divide between humans and nature directly inside humans themselves. The products of our minds (e.g., buildings, bridges, and dams) belong to the world of culture and are thus deemed not natural, while the products of the body (e.g., carbon dioxide, sweat, and the “call of nature”) belong to the world of the natural. But human cognitive and rational capacities are the products of natural evolution just as the body is. “How come,” Vogel asks, “*our* special skills get to transcend nature?” (2003: 153; emphasis in original). For Vogel and Callicott the answer is that the human mind, and by extension human culture, is the secular surrogate for a nature-transcending soul or spirit analogous to God the Creator transcending his Creation; the nature/culture distinction is really just the natural/supernatural distinction in disguise, old wine in a new bottle. And as Darwin has

animal culture—say, beaver dams—are not natural₂, and the question is, why not?

Moriarty’s answer is basically correct: the difference between animal culture and human culture is a matter of degree that is big enough to warrant a mutual exclusion that calls animal artifactual production “nature” and human artifactual production “culture.” But it is precisely this sharp boundary, an apparent difference *in kind*, that is accused of covertly assuming human/nature dualism. What is needed is a nondualist explanation for why we speak *in that way*; i.e., why the word “nature” (natural) is used to mark a discontinuity between human and animal culture as well as their continuity and unity.

falsified the supernatural distinctiveness of humans (i.e., humans are not specially injected with “God-stuff”) the distinction between the products of human culture (or human minds) and nature² has been falsified as well. The idea of wilderness, which relies on this distinction, is therefore fundamentally conceptually flawed and in need of revision.

Such is the state of impasse in this so-called “debate.” But it is important to note, tellingly, the relevant facts of the matter are not in dispute. Wilderness proponents do not typically deny humans are a part of nature, and those who charge wilderness with human/nature dualism do not typically deny humans are biologically unique. This indicates the problem is not with the distinction *per se* between humans and other species but the use of the *word* “nature” (natural) to mark the distinction. Piling on evidence of natural human distinctiveness as Woods does, or defending the nature/culture distinction as Moriarty does, thus tends to fall on deaf ears; philosophers like Callicott and Vogel will always say these points beg the question: “Why are *those* [e.g., nonhuman] processes called natural, while the ones *we* initiate are not?” (Vogel 2003: 152: emphasis in original).

It is not clear what kind of information Vogel is asking for, here. One answer is to say the distinction between “natural processes” and “the ones human initiate” is normative in that it reflects practical interests and moral concerns humans have (or it makes sense to have). The distinction is useful because “human culture is unique in terms of the amount and kind of information we are able to accumulate and pass on from generation to generation and in the ways that we are able to use that information to restructure our environment” (Moriarty 2007: 239). Deplezas-Zemp (2022) points out “natural” is not defined in contrast to what beavers or ants or coral reefs do because such a concept would tell us nothing about *our* human agency and moral responsibility

vis à vis other beings and entities. The concept of nature excluding beavers would serve no practical purpose. We distinguish the given world from our acting upon it because we have an ineliminable human perspective and take an interest in how we influence and impact our surroundings.⁶ Otherwise it would be impossible to distinguish, e.g., between a human-caused disaster such as the Deepwater Horizon oil spill and a disaster resulting from nonhuman causal forces (which we normally call a “natural” disaster), such as an earthquake or a meteor hitting the earth. It is difficult to imagine how modern civilization could understand and develop policy responses to its environmental impact, or even survive, without this distinction, especially when that civilization seems oblivious to or ignores ecological limits (Plumwood 2005: 25). The concept of independent nature makes these motivating human concerns intelligible (Scoville 2023).

If, on the other hand, Vogel is asking why we use the word “nature,” and not some other word, to distinguish those parts or aspects of the world humans have modified with their culture and technology from those they have not, I am compelled to answer “because that is what the word ‘nature’ ordinarily means.” The meaning of nature₂ is partly constituted by the distinction between (e.g.,) beavers and humans, and their dam-making activities. I could be accused of begging the question, but only

⁶ I use the philosophical “we” here because all humans must by definition have a human perspective, and thus must distinguish themselves from the world as a condition of thinking about the world at all, even if they do not give explicit linguistic expression to a clearly demarcated subject-object distinction. For example, a language community who refers to other living beings (e.g., trees) as their extended family must necessarily make the distinction (pointing to a tree) “*she is my mother,*” etc. I do not deny the possibility (e.g., in the Buddhist meditative tradition) of mystical human experiences in which the subject-object distinction disappears, but would say this experience ceases when one is *thinking about* the world, or how to live in and on it.

because demanding further justification is simply to deny the logical status of the proposition “nature is that which is not produced by human culture;” being true by definition, nature₂ is a conceptual truth (or norm of representation) and thus has normative status in a linguistic sense. It is used to justify, correct, or explain an empirical proposition (e.g., “those rock formations are not natural; they are ancient human ruins”). It cannot itself be refuted or confirmed empirically (Keeling 2009).⁷

Of course, Callicott and Vogel know what nature₂ means. And they do not deny the distinctiveness of human agency or the difference between beaver dams and the Hoover Dam on empirical grounds. It would be “silly” to do so (Ouderkirk 2003: 24). Rather, they decline to think of these empirical differences *in terms of* “nature” because they assume such thinking must stem from or involve a hangover from a pre-Darwinian ontological dualism between humans and nature. It seems the question “Why are *those* [e.g., nonhuman] processes called natural, while the ones we initiate are not?” is really a rhetorical question expecting no answer but designed to lead us to the dualist

⁷ Normative in the linguistic sense refers to the socially determined, constitutive rules that govern language use. Wittgenstein (1958: 25) likens the different roles of normative propositions and empirical propositions to the difference between the standard of measurement (e.g., a 1-meter rod) and the object being measured (e.g., the length of a room). While standards of measurement could be different from what they are, you cannot justify the length of a 1-meter rod by measuring it. Similarly, there is no way to justify nature₂ on empirical grounds. This is not to say, however, that linguistic rule-formation is arbitrary in the sense of operating completely independently of how the world actually is. What it means to “measure the length of a room” presupposes the length of the room does not haphazardly fluctuate, for example. In the same way, the linguistic rule “nature is that which is not the product of human culture” is a norm for representing empirical facts, a means of describing the world, and not itself an empirical fact or description of the world. Nonetheless the rule is non-arbitrary in the sense that it is answerable to the world being the way it is, e.g., the difference between human cultural agency and that of geology or beavers. I will have more to say on this in section 4.

conclusion. Given the dualism, it follows nature₂ should be rejected altogether; for Callicott and Vogel, nature₂ simply does not exist (and if it does not exist, how could it have any normative content?). Unsurprisingly, they prefer to get rid of the supposed ontological dualism by either reducing culture to nature (Callicott), such that everything humans do is natural, or by reducing nature to culture (Vogel), such that nature is socially/culturally constructed by humans, positions which (it is often observed) do not correct or overcome the terms of the dualism but simply reinforce them (Plumwood 1998, Ouderkirk 2003, Lie 2021). In what follows I will show that this philosophical mess arises out of a linguistic misunderstanding.

3. A Better Explanation: “Nature” as Vertical Polyseme

The allegation that the valuation of wild nature assumes human/nature dualism is an example of “the bewitchment of our intelligence by means of language” (Wittgenstein 1958: 47). It treats the exclusion of human works from nature₂ (e.g., in protected wilderness areas) as tantamount to the exclusion of humans from nature₁, the proposition that humans (or their minds) are supernatural. It thus interprets a linguistic dualism, in which humans are spoken of as being both “a part of” and “apart from” nature, as an unconscious commitment to a problematic ontological dualism between humans and nature. It is instructive, therefore, to investigate whether other terms in the English language operate unproblematically in a similarly dual fashion, both inclusively and contrastively. Other examples of such dual use would suggest there is nothing particularly unique about the concept of nature₂ in this respect, that it functions similarly to many other words, and can be explained as an innocuous feature of language (albeit ripe for theoretical scrutiny) rather than as a problematic ontological dualism that needs fixing or expunging.

A better explanation is in fact available: the polysemous word “nature” is likely a case of *vertical polysemy*, a term used by linguists to describe a word that denotes both a set and a member of that same set, thus capable of taking on two different, yet nested meanings, which appear to have contradictory implications (Kempson 1980, Horn 1984, Koskela 2014a, 2014b).⁸ For example, the term “cow” may be used to denote the set of all cows, as well as the subset of cows that excludes bulls, i.e., female cows. The term “cow” thus has a dual meaning, an A₁ term referring to the set of all cows and an A₂ term referring to the set of female cows that contrasts with a B term, bulls, as follows:

cows₁
 cows₂ bulls

Horn (1984: 34) writes: “[A₁] may (and usually does) retain its general application so as to include [B] in contexts where *no contrast is at issue* with [B]” (emphasis added). A road “blocked by cows₁” may include bulls. But “cow” in the expression “it is time to milk the cows” refers only to female cows, cow₂. It is only when the sex of the animal is relevant that bulls do not count as cows. “A bull is not a cow₂” will be true insofar as sex matters, despite the logical entailment that “all bulls are cows₁.” The vertical polysemy can be explained by the maxim of informativeness outlined by Grice (1975),⁹

⁸ Ruth Kempson explains the governing principle of vertical polysemy as follows: “If a lexical item L1 has as its extension S1 which includes the set S2 which a second lexical item L2 has as its extension..., then L1 may be used to denote that subset of S1 which excludes S2” (Horn 1984: 33). Horn (1984) coined the term *autohyponym* to describe cases of vertical polysemy where the subordinate terms are *kinds* or *types* of the superordinate term.

⁹ The maxim is summarized as “your contribution should be neither more nor less than required” (Grice 1975: 47).

making it unnecessary to say “the road is blocked by cows and bulls” or “the cows that are not bulls need milking.” Other examples of vertical polysemy include the following:

rectangles (excluding squares)

fingers (excluding thumbs)

shoes (excluding boots, sandals, slippers, etc.)

plants (excluding trees)

earth (excluding ocean)

day (excluding night)

While these cases may differ with respect to the manner and degree of the conventionalization and inferences involved, they represent a quite ordinary feature of language: a superordinate or “umbrella” term (A_1) can have a subordinate meaning (A_2) that excludes another member (B, etc.) of the set denoted by A_1 , when the contrast with B is relevant, useful, or important. Although the sense distinctness between the A_1 and A_2 terms will vary in different cases, the important feature for this discussion is that the A_2 term is logically subsumed under A_1 .¹⁰ To the above list we can add the following:

animals (excluding humans)

¹⁰ The examples of earth/ocean and day/night represent a kind of vertical polysemy different from autohyponymy, better characterized as *automeronymy*, in which the A_2 term (earth as land/soil) is a constitutive *part of* A_1 (planet earth), which is contrasted with another part (B) of A_1 , ocean (e.g., the “Department of Earth, Ocean and Atmospheric Sciences”). Unlike in cases of autohyponymy where, e.g., a square is a kind or type of rectangle, the ocean is not a type or kind of earth. What matters for present purposes, however, is that these examples show B to be either a *kind/type of* A_1 or *part of* A_1 . B is thereby in a relationship of ontological categorical inclusion with A_1 , despite being linguistically excluded from A_2 .

The term “animal” is often used in such a way as to exclude humans (and its own subordinate terms, such as “people,” “person,” “man,” “woman,” “child,” etc.) despite the fact humans belong to the set denoted by the umbrella term, animal₁. If Jane says “I saw an animal in the yard last night” we can infer she did not think she saw a human being, otherwise she would have said so, by saying, e.g., “somebody” or “person.” In Gricean terms we understand the difference between what Jane (literally) said and what she meant, or implicated; she means animal₂. This usage in no way suggests, let alone assumes, humans are not animals₁. It simply reflects Jane’s practical interest in whether what she saw in the yard was a human, or not. The difference is important; an animal might mean the garbage can lids need tightening or the garden needs wire put around it. A prowler might mean she should call the police. We can be confident that stuffed *animals*, *animal* shelters, *animal* rights activists, *animal* lovers, and *animal* crackers do not involve any problematic human/animal dualism, despite excluding humans.

The word “nature” presents a special challenge because, unlike the foregoing examples, it does not readily admit of a single, standard A₁ definition, in the way, e.g., cow₁ denotes “a member of the species *Bos taurus*.” However, it seems reasonable to adopt the standard philosopher’s definition of nature (e.g., Mill, 1961) as an umbrella term for everything in the physical universe and its physical laws that excludes the supernatural, as this is the definition Callicott and Vogel insist upon in their arguments alleging human/nature dualism. It seems likely, then,

nature (excluding humans)

is a case of vertical polysemy. If John says “I love nature” while gesturing towards an uncultivated, undeveloped landscape we are inclined and entitled to infer he is expressing a special fondness and appreciation for nonhuman processes and their products, such as plants, animals, rivers, mountains, and, perhaps, beaver dams. He is

referring to nature₂. The term “nature” in *nature* preserves, reserves, and parks, *nature* walks, connecting with *nature*, being in *nature* and being a *nature* lover is ordinarily interpreted as contrasting with humans. Although humans may be present in a nature preserve, its *raison d'être* is to protect nature₂—nonhuman processes and their products—within its boundaries. John may enjoy being in nature with other people, but being with other people is not what he *means* by saying he “loves nature.” Nature₂ does not, however, assume the exclusion of humans from nature₁. As in the animal₂ case, nature₂ is motivated by the linguistic pragmatism of distinguishing humans from the rest of the set denoted by nature₁.

When we modulate the umbrella term nature₁ to its adjectival form, natural₁, we can see that the term “natural” in *natural* places, spaces, and settings, *natural* scenery, *natural* features, *natural* beauty, *natural* history, *natural* resources, *natural* causes, and *natural* disasters is ordinarily interpreted as contrasting with human cultural agency despite the fact that human cultural agency is natural, a product of nature₁. Typically, the products or results of human cultural agency are termed “man-made,” “artificial,” “artefactual” or perhaps (in the case of the Wilderness Act) “trammelled.” As with the previous examples, the umbrella term natural₁ retains its general application so as to include what is “man-made” or “artificial” in contexts where there is no contrast at issue with nonhuman processes, forces, or agency, natural₂. On this broader, inclusive reading the Hoover Dam in Arizona is “as natural as” a beaver dam. Insofar as the contrast between human cultural agency and other agencies is at issue or relevant, the Hoover Dam does not count as natural₂.

Of course, as mentioned earlier, natural₂ is a gradable adjective and thus can be a matter of degree. For example, the structure and composition of a secondary growth, logged forest will be a complex synthesis of natural₂ and human causal factors.

Nonetheless, in the same way we can distinguish “day” from “night” even though there is a gradient between them, we can understand the conceptual distinction between nature₂ and human cultural agency through paradigmatic examples such as the Hoover Dam and a beaver dam, or the Owichomo Bridge in Utah’s “Natural Bridges National Park” and the Golden Gate Bridge in San Francisco. If John were to say “I love nature” while gesturing toward a garden we would infer he is expressing appreciation and fondness for the specifically *nonhuman* contribution to the garden’s existence and the existence of its constituent elements even though a garden by definition involves human cultural agency and is therefore less natural₂ than an uncultivated, undeveloped landscape (otherwise John would say something like “I love gardens,” or “I love roses”). This is consistent with John explaining his preference for undeveloped, uncultivated landscapes over gardens by saying he “loves nature.” On the other hand, if John said “I love nature” while gesturing toward an airport parking garage we would likely think he was joking (see Keeling 2009: 510).

That there is no contradiction between the two readings of “natural” is evident by the special care Callicott (1998b: 350) takes when he says (quoted earlier, now with emphasis added) humans are an evolved species “not essentially different *in this respect* from all others...” He nowhere denies humans may be “essentially different” in a different respect. Elsewhere he puts it this way: “the cultural works of man are evolutionary phenomena no less than other massive structures created by living things, such as, say, coral reefs. They are, one in all, natural *in that sense of the word*” (Callicott 1998b: 351; emphasis added). Sober takes similar care in his formulation of the naturalist argument: “We are part of nature—one species among many others. If we are part of nature, then everything we do is part of nature, and is natural *in that primary sense*” (Sober 1986: 173; emphasis added). Callicott and Sober are right to insist

humans are evolved just as beavers and all other species are. But the inference to the conclusion that the Hoover Dam is “as natural as” a beaver dam does not falsify the proposition that human works are not natural₂. Natural₂ is conventional and remains linguistically normative despite the fact the Hoover Dam is as natural₁ as a beaver dam.¹¹ The two “natures” have different truth-conditions, and therefore meet the standard test for ambiguity, despite the linguistic fact (characteristic of vertical polysemy) that the human-excluding sense is logically subsumed under the other, human-including sense, and is thus “sufficiently allied with it so as to admit of confusion,” as Mill (1961: 445) observed.

It remains to address a lingering question from section 2. The references to “man” in the many quotes about wilderness found in this paper treat “man” as a vertical polyseme that arguably is inadvertently sexist (e.g., with expressions such as “man-made”). Why might this be the case, and how is “nature” a different case with respect to human/nature dualism? One cannot resolve this question by investigating etymological word-roots. For example, both the Germanic “Mann” and the Romance “Homo”

¹¹ Although an explanation is not needed here, the conventionalization of nature₂ is likely explained by Gricean maxims of informativeness and relevance. It is not linguistically parsimonious to assert the Golden Gate Bridge is “natural₁, but man-made” or “natural₁, but produced by humans.” Which is to say, there is no particular reason to remind us the Golden Gate Bridge does not violate the laws of physics, it is not a divine miracle, or a paranormal phenomenon. Because we already know the bridge was built by humans, there will also normally be no reason to assert it is not natural₂. In fact, due to the Gricean maxim of relevance (which would induce the hearer to wonder why the “naturalness” of the bridge has come up at all), actually asserting “the Golden Gate Bridge is not natural” would likely elicit a response that invokes nature₁, “but it is made out of materials that came from the earth...” We will normally only assert something is natural₂, or not, when we deem this information is relevant or needs pointing out. For example, “That bare patch on the forested hill over there is not natural. It is an old clear cut.”

originally referred generically to all humans. There is nothing sexist about that. One must investigate how “man” is actually, normally used. According to Horn and Kleinedler (2000), the original sex-neutral meaning of “man” narrowed after the Early Middle English period (1100–1300) to mean “human adult male,” from which the contrast term “woman” (Old English “wif”: + “man”) emerged (rather than the other way around; it is not the case that the inclusive reading of “man” to denote all of humanity emerged from the narrower, male-specific meaning). Thus, we have the historical vertical polyseme:

man (excluding women)

However, what makes this case different from the others is the male-specific man₂ tellingly precludes the application of the sex-neutral man to women, effectively nullifying that contextual usage; the sex-neutral man is now a “myth” (Moulton 1981). “All women are men” or “some men menstruate” sound like logical contradictions, not valid inferences like “all bulls are cows” or “some cows are bulls,” a linguistic fact that is not got around by saying “let us stipulate ‘man’ means ‘a member of the human species.’”¹² The use of “man” to denote a member of the human species could be said to now be inadvertently sexist because the term was usurped by adult males who were reckoned to be the culturally salient prototype of “man.” Man₁ thus marginalizes women as not fully (i.e., sub) human regardless of the speaker’s intention in using the term in that way. Unlike the other cases of vertical polysemy, man₁ fails to retain its general application so as to include women in contexts where sex is irrelevant (this could be because the sexual contrast has historically been deemed relevant in far more social

¹² If one does not like the cow/bull example one may choose another; “all squares are rectangles” and “some rectangles are squares,” (autohyponymy) or “oceans are part of earth” and “earth has oceans,” (automeronymy), etc.

contexts than it is now). Man₁ does not come off as intended, especially, as is the case, when one considers that genuine sex-neutral terms such as “human,” “people,” and “person” are available as workable substitutions.

I leave it to etymologists and linguists to understand the origin and history of the word “nature.” What matters here is it does not have the problem “man” does. To show that the conventionalization of nature₂ is infected with human/nature dualism one would have to show (as in the man₂ case) that its conventionalization precludes applying the term “nature” to human cultural products regardless of what the speaker intends. But we have seen this is clearly not the case; one may unproblematically assert “the Hoover Dam is natural” with the stipulation “by natural I mean produced by a naturally evolved species,” which is precisely what Callicott and Sober do. Thus, whereas the conventionalization of the masculine usurpation of man₁ effectively disables (or renders infelicitous) the context where man₁ refers inclusively to women, the conventional distinction between the Hoover Dam and a beaver dam does not disable the context where nature₁ refers inclusively to the Hoover Dam. It is harder to conceive of a context in which it makes sense to say “all women are men” or “a woman is man.”

The linguistic analysis of “nature” (natural) as a vertical polyseme both explains and dispels the fundamental illusion that maximizing naturalness within parks and wilderness by “keeping humans out of or apart from nature” must reflect a perspective of human/nature dualism. Examples of this misunderstanding abound in the environmental philosophy literature. A typical example is Turner when he decries the “environmental religious” dogma that “humans are different and separate from, and subordinate to, a transcendent Nature.” He continues “...the distinction [the environmentalist religion] draws between the human and the natural is patently false,” and “We are descended from a direct evolutionary line from natural animal species and

are ourselves a natural species” (cited in Moriarty 2007: 232). Turner mistakenly equates the concept of nature₂, which “draws a distinction between the human and the natural,” with human exclusion from nature₁. This is akin to believing that the distinction between a female cow and a bull is “patently false” because it assumes bulls are not members of the species *Bos taurus*, thus committing us to a problematic “bull/cow dualism.” In similar fashion, Vogel (2002: 25) routinely conflates the claim “humans are distinct from all other species on Earth” (which is true) with the claim humans are “ontologically *sui generis*” (which is false).¹³

In fact, it is those who accuse the wilderness idea of covert human/nature dualism who seem to be operating with religious-like (i.e., dogmatic) assumptions. The Wilderness Act of 1964 reflects a contrastive-inclusive relation between the natural and the human. Section 2(c) of the U.S. Wilderness Act begins by saying “Wilderness, in *contrast* with those areas where man and his works dominate the landscape...,” (Callicott and Nelson 1998: 121; emphasis added). It does not thereby exclude humans outright, but only certain human uses, in particular “mechanized” ones (Sutter 2002, Fincher 2012), and “permanent improvements or human habitation.” Early wilderness advocates such as Howard Zahniser believed wilderness is valuable precisely because it can foster deeper human awareness of their thoroughgoing naturalness. Zahniser (1956) writes:

This need is for areas of the earth within which we stand without our mechanisms that make us immediate masters over our environment—areas of wild nature in

¹³ This conflation is also evident in Vogel’s claim “without dualism the strong distinction between nature and the human...cannot get off the ground...” (see 2003: 153–154). Vogel is going after Elliot and Katz here, but the claim of this paper, *contra* Vogel, is that the human/nature distinction can “get off the ground” without dualism. I believe Woods (2017: 52–64) also refutes Vogel’s argument.

which we sense ourselves to be, what in fact I believe we are, dependent members of an interdependent community of living creatures that together derive their existence from the Sun.

This and writings from other early wilderness advocates reinforce the idea that contact with and appreciation of nature² may be necessary for a complete human recognition and understanding of human membership in the natural world, a *nondualist* view. Places where nature² is permitted to be as wild and free as possible represent significant opportunities for this contact and appreciation in the contemporary world, and are thus an important part or aspect of the human/nature relationship, teaching humility and restraint (Fincher 2012). “To know the wilderness,” Zahniser (1956) explained, “is to know a profound humility, to recognize one’s littleness, to sense dependence and interdependence, indebtedness, and responsibility.” As a foil for contemporary, hyper-technological society, wild places can serve to influence and inform ethical re-considerations of nature, society, and technology and how they should relate, thus contributing to ethically grounded nature-society integration, rather than alienation (Havlick 2006). *Ipsa facto*, a maximally humanized world without wild places would represent not just an environmental loss but the loss of a significant repository of human self-knowledge and meaning (Goodin 1992, Ouderkirk 2003).¹⁴

¹⁴ I owe the expression “maximally humanized world” to Eric Keeling. This is an offered nuance to the concept of a “fully humanized world,” which runs throughout the work of Katz (1997) and Crist (2019). The total submission or literal “ending” of nature² is physically impossible because, at some scale, some element of independent nature is present in the most artificial, human-built environments, e.g., the molecules in a plastic chair. Ouderkirk (2003: 27) discusses the “homogenization of the world” through “conquest of the nonhuman,” which obviously does not occur at the molecular level.

4. Is Wild Nature Real?

I must briefly address a possible social constructivist response to my claim that the concept of nature₂ is not an empirical truth about the world but a norm of representation for describing it, e.g., by enabling empirical claims such as “the Owichomo Bridge in Utah is a natural bridge.” It follows that language communities that do not (or did not) have this concept do not (or did not) make sense of the world in this way. Is this an admission that the distinction between the Owichomo Bridge and the Golden Gate Bridge is not real, as it is “only” a cultural construction of language? No, it only shows the distinction is (or was) not relevant, useful, or important to that language community. Although it is true that the interests and purposes of a particular language community partly determine the concepts and categories they use and the distinctions they make, it does not follow that the properties picked out by those concepts, categories, and distinctions are determined by the community’s interests and purposes. There is only one English word for “rice” where the Chinese language uses four different characters for “rice seedlings,” “unhusked rice,” “uncooked rice,” and “cooked rice” (Cao 2022: 87). It does not follow that the properties of rice picked out by the Chinese language are not real because they are “constructed” by the Chinese language. They may use a specialized vocabulary to state facts about rice, but the vocabulary does not create those facts. Rather, what the vocabulary shows is that facts about rice are relevant, useful, or important in Chinese culture. The same goes, I would argue, for facts about the type, scale, and rate of modern human technological impact upon and transformation of nature₂; these are non-linguistic facts that are observable, measurable, and knowable whether or not the concept of nature₂ is universally in force or whether people care about these facts. As Peterson (1999: 352) puts it, “although such terms as *nature* and *wilderness* are not historically or culturally universal, we should not conclude that they

do not have real referents or that we cannot know them in a meaningful way.” Katz (2005: 82) points out we do not need a perfect ontological understanding of nature₂ that is (somehow) outside of our human conceptualization of it to know what it is to dominate or liberate it. “It is a nature that we understand through human categories. But this does not make it any less autonomous.”

If, however, the concept of nature₂ is deemed to be an obstacle to finding solutions to our environmental problems or felt to reflect an undeserved Western linguistic hegemony over environmental discourse, then perhaps we need to stop doing environmental ethics in languages that use the concept.¹⁵ Although I believe this to be unnecessary, I have no objection to it in principle. Certainly, language diversity is good, and we all gain by understanding the conceptual frameworks of different language users. The acknowledgement of such differences is important to environmental ethics, by enabling us to scrutinize and criticize how we understand and value our world and making us aware of alternative conceptions and valuations. However, I doubt getting rid of the concept of nature₂ is likely to succeed, particularly in the historical context of a globalized “society inured to mastery and pressing its ecological limits,” an understanding of which “requires some concept of nature, whatever the language used to express it” (Plumwood 2005: 45).

5. The Actual, Real Wilderness Debate

The naturalist argument against wilderness that began this paper misses its mark not because of poor aim but because it aims at a mark that is not there. Wilderness requires

¹⁵ For the environmental liabilities of the English language, see Chawla (1991). Despite these liabilities, I am not aware of (nor does Chawla mention) any empirical data showing that parks and protected wilderness areas perpetuate or contribute to the belief among the general public that humans are not a part of nature.

and assumes something like nature₂ but that concept does not require or assume a human/nature dualism that needs to be corrected or overcome. There is a better explanation for the seeming contradiction between the valuation of wild nature (which “separates” humans from nature) and the thoroughgoing naturalness of humanity: the term “nature” (natural) shows characteristics of vertical polysemy, with a broader, inclusive and a narrower, contrastive meaning, or use. This double-duty is a function of the same linguistic pragmatism that governs the use of many other English terms, and, while it may be of special interest for linguists, it is not *per se* problematic for the valuation of wild nature. To the contrary, because vertical polysemy expresses ontological “continuity-with-difference” (Ouderkirk 2003: 28) it allows us to develop an “environmental philosophy that acknowledges both our differences from and our unity with wild nature” (15).

Whether we *care* about wild nature is the question at issue. This requires us to consider whether some concept of nature’s independence from human agency is relevant and important to us. It is a question about values and norms (not about Darwin or human/nature dualism), and ultimately about the value of places on the earth left alone from human management and control where nature is allowed to be wild and free.

Goodin states his “green theory of value” as follows:

It is not diversity, complexity and fecundity as such that we value. It is instead the diversity, complexity and fecundity of natural processes and their products. The value of such attributes derives from the fact that they result from natural processes, rather than the other way around. (1992: 36)

If Goodin’s theory is right, then it follows that resistance to a maximally humanized world is part of what it means to be green, and wilderness has a necessary role to play in a multifarious human/nature relationship. If Goodin is wrong, then being green requires no such resistance; prudential management of the earth’s resources for a maximally

humanized world is sufficient, and wilderness is not necessary. This is an actual, real debate. To undermine the debate with “everything humans do is natural” does not, and should not, count as a legitimate move. It should be dismissed out of hand as an irrelevant distraction, or playing with words, a trap. Whatever problems there may be with the idea of wild nature and the policy of wilderness protection, human/nature dualism is not one of them.

Disclosure statement

No potential conflict of interest was reported by the author.

References

Aplet, Gregory H. and David N. Cole. 2010. “The Trouble with Naturalness: Rethinking Park and Wilderness Goals.” In *Beyond Naturalness: Rethinking Parks and Wilderness Stewardship in an Era of Rapid Change*, edited by David N. Cole and Laurie Yung. Island Press.

Brower, David, ed. 1961. *Wilderness: America’s Living Heritage*. Sierra Club.

Callicott, J. Baird. 1996. “Do Deconstructive Ecology and Sociobiology Undermine Leopold’s Land Ethic?” *Environmental Ethics* 18(4): 353–372
<https://doi.org/10.5840/enviroethics19961843>.

Callicott, J. Baird. 1998a. “That Good Old-time Wilderness Religion” In *The Great New Wilderness Debate*, edited by J. Baird Callicott and Michael P. Nelson. University of Georgia Press. Originally published in *The Environmental Professional* 13 (1991): 378–379

Callicott, J. Baird. 1998b. “The Wilderness Idea revisited: The Sustainable Development Alternative.” In *The Great New Wilderness Debate*, edited by J.

Baird Callicott and Michael P. Nelson. University of Georgia Press. Originally published in *The Environmental Professional* 13 (1991): 370–377

Callicott, J. Baird and Michael P. Nelson, eds. 1998. *The Great New Wilderness Debate*. University of Georgia Press.

Callicott, J. Baird and Michael P. Nelson, eds. 2008. *The Wilderness Debate Rages On*. University of Georgia Press.

Cao, Panpan. 2022. “Hyponymy: Special Cases and Significance.” *Proceedings of the Third International Conference on Language, Communication, and Culture Studies*: 83–90. <https://www.atlantis-press.com/proceedings/iclccs-22/125977895>.

Chawla, Saroj. 1991. “Linguistic and Philosophical Roots of Our Environmental Crisis.” *Environmental Ethics* 13(3): 253–262.
<https://doi.org/10.5840/enviroethics199113312>.

Colwell, Tom. 1987. “The Ethics of Being Part of Nature.” *Environmental Ethics* 9(2): 99–113. <https://doi.org/10.5840/enviroethics19879232>.

Crist, Eileen. 2019. *Abundant Earth: Toward an Ecological Civilization*. University of Chicago Press.

Cronon, William. 1998. “The Trouble with Wilderness.” In *The Great New Wilderness Debate*, edited by J. Baird Callicott and Michael P. Nelson. University of Georgia Press. Originally published in Cronon, William, ed. 1996. *Uncommon Ground: Toward Reinventing Nature*. W.W. Norton.

Deplezas-Zemp, Anna. 2022. “Are People a Part of Nature? Yes and No.” *Environmental Ethics* 44(2): 99–119.
<https://doi.org/10.5840/enviroethics202242736>.

Elliot, Robert. 1997. *Faking Nature*. Routledge.

- Fincher, Mark. 2012. "Humans Apart from Nature? Wilderness Experience and the Wilderness Act." *USDA Forest Service Proceedings* RMRS-P-66, 2012, 152–157. <https://research.fs.usda.gov/treesearch/40920>.
- Goodin, Robert E. 1992. *Green Political Theory*. Polity Press.
- Grice, H. P. 1975. "Logic and Conversation." In *Syntax and Semantics 3: Speech Acts*, edited by Peter Cole and Jerry Morgan. Academic Press.
- Hailwood, Simon A. 2000. "The Value of Nature's Otherness." *Environmental Values* 9 (3)(2000): 353–372.
- Havlick, David. 2006. "Reconsidering Wilderness: Prospective Ethics for Nature, Technology and Society." *Ethics, Place & Environment* (1): 47–62.
<https://doi.org/10.1080/13668790500512563>.
- Hayward, Tim. 1994. *Ecological Thought: An Introduction*. Polity Press.
- Heyd, Thomas, ed. 2005. *Recognizing the Autonomy of Nature: Theory and Practice*. Columbia University Press.
- Horn, Laurence. 1984. "Towards a New Taxonomy for Pragmatic Inference: Q-based and R-based implicature." In *Meaning, Form and Use in Context: Linguistic Applications*, edited by Deborah Shiffrin. Georgetown University Press.
- Horn, Laurence and Steven Kleinedler. 2000. "Parasitic Reference vs. R-based Narrowing: Lexical Pragmatics Meets He-Man." Paper presented at Linguistic Society of America annual meeting in Chicago, Il., U.S.A.
https://ling.yale.edu/sites/default/files/files/horn/HornKleinedler2000_he-man.pdf.
- Katz, Eric. 1997. *Nature as Subject: Human Obligation and Natural Community*. Rowman and Littlefield.

- Katz, Eric. 2005. "The Liberation of Humanity and Nature." In *Recognizing the Autonomy of Nature: Theory and practice*, edited by Thomas Heyd. Columbia University Press.
- Kaye, Roger. 2007. "Yes, Virginia, There is Wilderness." *Wilderness Watcher* 18(3): 8–10.
- Keeling, Paul M. 2009. "Does the Idea of Wilderness Need a Defence?" *Environmental Values* 17(4): 505–519. <https://doi.org/10.3197/096327108X3685>.
- Kempson, Ruth. 1980. "Ambiguity and Word Meaning." In *Studies in English Linguistics*, edited by Sidney Greenbaum, Geoffrey N. Leech, and Jan Svartvik. Pearson Longmans.
- Koskela, Ana. 2014a. "Inclusion, Contrast and Polysemy in Dictionaries: The Relationship Between Theory, Language Use and Lexicographic Practice." *Research in Language* 12(4): 319–340. <https://doi.org/10.1515/rela-2015-0001>
- Koskela, Ana. 2014b. "Shoes, Boots and Vertical Polysemes: The Dynamic Construal and Conventionality of Word Senses." *Review of Cognitive Linguistics* 12(2): 259–287. <https://doi.org/10.1075/rcl.12.2.01kos>.
- Lee, Keekok. 2005. "Is Nature Autonomous?" In *Recognizing the Autonomy of Nature: Theory and Practice*, edited by Thomas Heyd. Columbia University Press.
- Leopold, Aldo. 1966. *A Sand County Almanac*. Oxford University.
- Lie, Svein Anders Noer. 2021. "A Critique of Steven Vogel's Social Constructionist Attempt to Overcome the Human/Nature Dichotomy." *Environmental Values* 30 (5): 635–654. <https://doi.org/10.3197/096327121X160811608347>.
- Mill, J. S. 1961. "Nature." In *The Philosophy of John Stuart Mill*, edited by Marshall Cohen. Random House.

- McKibben, Bill. 1989. *The End of Nature*. Random House.
- Moriarty, Paul V. 2007. "Nature Naturalized: A Darwinian Defense of the Nature/Culture Distinction." *Environmental Ethics* 29 (3): 227–246
<https://doi.org/10.5840/enviroethics20072932>.
- Moulton, Jane. 1981. "The Myth of the Neutral 'Man.'" In *Sexist language: A Modern Philosophical Analysis*, edited by Mary Vetterling-Braggin. Littlefield, Adams.
- Muir, John. 1911. *The Mountains of California*. Century.
- Muir, John. 1916. *A Thousand Mile Walk to the Gulf*. Houghton Mifflin.
- Nash, Roderick. 1967. *Wilderness and the American Mind*. Yale University.
- Ouderkirk, Wayne. 2003. "On Wilderness and People: A View from Mt. Marcy." *Philosophy and Geography* 6(1): 15–32.
<https://doi.org/10.1080/1090377032000063298>.
- Peterson, Anna. 1999. "Environmental Ethics and the Social Construction of Nature." *Environmental Ethics* 21(4): 339–357.
<https://doi.org/10.5840/enviroethics19992142>.
- Peterson, Brian, and John Hultgren. 2020. "The Case for a 21st Century Wilderness Ethic." *Ethics, Policy and Environment* 23(2): 222–239.
<https://doi.org/10.1080/21550085.2020.1848183>.
- Plumwood, Val. 1998. "Wilderness Scepticism and Wilderness Dualism." In *The Great New Wilderness Debate*, edited by J. Baird Callicott and Michael P. Nelson. University of Georgia Press.

- Plumwood, Val. 2005. "Towards a Progressive Naturalism." In *Recognizing the Autonomy of Nature: Theory and Practice*, edited by Thomas Heyd. Columbia University Press.
- Rolston, Holmes. 1998. "The Wilderness Idea Reaffirmed." In *The Great New Wilderness Debate*, edited by J. Baird Callicott and Michael P. Nelson. University of Georgia Press.
- Scoville, Michael. 2023. "On the Concept of Independent Nature." *Environmental Philosophy* 20(2): 237–265. <https://doi.org/10.5840/envirophil2023105135>.
- Sober, Elliot. 1986. "Philosophical Problems for Environmentalism." In *The Preservation of Species*, edited by Bryan G. Norton. Princeton University Press.
- Stephens, Piers H. G. 2000. "Nature, Purity, Ontology." *Environmental Values* 9(3): 267–294. [doi:10.3197/096327100129342065](https://doi.org/10.3197/096327100129342065).
- Sutter, Paul. 2002. *Driven Wild: How the Fight Against Automobiles Launched the Modern Wilderness Movement*. University of Washington.
- Thoreau, Henry D. 1914. *Walking*. Riverside Press.
- Vogel, Steven. 2002. "Environmental Philosophy After the End of Nature." *Environmental Ethics* 24 (1): 23–39. <https://doi.org/10.5840/enviroethics200224139>.
- Vogel, Steven. 2003. "The Nature of Artefacts." *Environmental Ethics* 25(2): 149–168. <https://doi.org/10.5840/enviroethics200325230>.
- Watson, James E. M., Oscar Venter, Jasmine Lee, Kendall R. Jones, John G. Robinson, Hugh P. Possingham, James R. Allan. 2018. "Protect the Last of the Wild." *Nature* 563: 27–30. <https://doi.org/10.1038/d41586-018-07183-6>.

White, Lynn Jr. 1967. "The Historic Roots of Our Ecologic Crisis." *Science* 155 (3767): 1203–1207. DOI: 10.1126/science.155.3767.1203.

Wittgenstein, Ludwig. 1958. *Philosophical Investigations*. Macmillan.

Woods, Mark. 2017. *Rethinking Wilderness*. Broadview Press.

Young, Samuel H. 1915. *Alaska Days with John Muir*. Fleming H. Revell.

Zahniser, Howard. 1956. "The Need for Wilderness Areas." *Living Wilderness* (59): 43–58. <https://explorepahistory.com/odocument.php?docId=1-4-31D>.