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# Reconciling Realism and Constructivism in Environmental Ethics

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## ABSTRACT

This paper outlines a constructivist approach to environmental ethics which attempts to reconcile realism in the ontological sense, i.e., the view that there is an objective material world existing outside of human consciousness, with the view that how nature is understood and acted in are epistemologically and morally constructed. It is argued that while knowledge and ethics are indeed culturally variable, social constructions of nature are nonetheless constrained by how things actually stand in the world. The 'realist' version of constructivism proposed here can be linked to dialectical forms of reasoning which see knowledge and ethics as arising out of human interactions with an objectively real environment, and contrasted with strong constructivist views which see nature as 'nothing more than' a social construct. While both the physical environment and human attitudes towards it are in part socially constructed, nature also retains a measure of autonomy, or 'wildness', apart from human constructions.

## KEYWORDS

Constructivism, guiding visions, autonomy of nature, dialectics

## INTRODUCTION

Constructivism in environmental philosophy and ethics acknowledges the extent to which our understanding of and attitudes towards nature are socially constructed and therefore historically and culturally variable (Wilson 1992; Simmons 1993; Cronon 1996; Descola 1996; Eder 1996; Ellen and Fukui 1996; Robertson *et al.* 1996; Vogel 1996; Braun and Castree 1998; Keulartz 1998; Macnaghten and Urry 1998). Recognising this fact does not, however, support the idealist

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tendency to equate epistemological and moral constructions of nature with its ontological reality. In Soper's words,

It is true that we can make no distinction between the 'reality' of nature and its cultural representation that is not itself conceptual, but this does not justify the conclusion that there is no ontological distinction between the ideas we have of nature and that which the ideas are about: that since nature is only signified in human discourse, inverted commas 'nature' *is* nature, and we should therefore remove the inverted comma (1995, p. 151).

Contemporary debates about constructivism, which have influenced a variety of disciplines particularly in the social sciences (for good overviews see Holstein and Miller 1993; Burr 1995; Benton and Craib 2001), have tended to revolve around the question of whether objective evidence can be appealed to in settling disputes about how things actually stand in the world. Social constructionism, particularly in its postmodern variations, has tended towards a reductive idealism which sees reality itself as 'nothing more than' a social construct. Edwards, Ashmore and Potter's contention that there is no '...objective world as given, as distinct from processes of representation; as directly apprehended, independent of any particular description' (1995, p. 26) typifies the view that 'nature' has no reality apart from how it has been socially constructed. Global warming, for example, is seen not as a 'real' phenomenon which can be empirically observed and scientifically explained but rather as something which people situated in different social groups have conflicting views about, none of which can be privileged over any other. The relativism implicit in this approach suggests that political debate and public policy are largely decided on the basis of which side can muster the most power, rather than evidence, in support of its views.

Against idealistic versions of constructivism, this paper will argue that constructivism in the realms of epistemology, value theory, and ethics is entirely compatible with what Searle refers to as 'external realism', namely the view that '... the world exists independently of our representations of it' (1995, pp. 152–3). The version of constructivism developed in the first part of the paper accepts realism in the ontological sense, i.e., the view that there is a real world outside of human consciousness and language, while acknowledging that the world itself underdetermines how it should be thought about, valued, or acted in by humans. Knowledge, values, and ethics cannot be 'read out of the world', but are rather a product of constructive activity at both the personal and the social levels. These constructions are nonetheless constrained by how things actually stand in the world. It will be argued that the task of ethics is to construct 'guiding visions', both within and between cultures, which structure action towards the achievement of objectively realisable goals.

The second part of the paper shows how a more 'realist' version of constructivism can preserve a sense of the autonomy of nature against more idealistic constructivist positions, such as Vogel's (1996), which tend to regard nature

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itself as a social construct. Rather than see the human–nature relationship in dualistic terms (which places the two sides in opposition to each other) or in monistic terms (which simply collapses the natural into the human or vice versa), a dialectical position is presented which sees humanity and nature as simultaneously shaping and being shaped by the other, while each maintaining a measure of autonomy.

## A CONSTRUCTIVIST APPROACH TO EPISTEMOLOGY AND ETHICS

*A constructivist theory of knowledge*

In the constructivist view, the world itself underdetermines how it should be thought about or acted in. Nature presents itself to experience as an undifferentiated flux which our various constructions attempt to cognitively organise. The view that material reality is in a constant state of change, which extends from Heraclitus to process philosophy and modern quantum physics in the West (on the relevance of process philosophy and quantum physics to environmental philosophy see Capra 1983; Sessions 1985; Zimmerman 1988; Callicott 1989, chap. 9; Mathews 1991, chap. 2), contends that what we take to be ‘objects’ in the world are only relatively stable. The biophysicist Morowitz writes,

[V]iewed from the point of view of modern [ecology], each living thing is a dissipative structure, that is, it does not endure in and of itself but only as the result of the continual flow of energy in the system ... From this point of view, the reality of individuals is problematic because they do not exist per se but only as local perturbations in this universal energy flow ... Consider a vortex in a stream of flowing water. The vortex is a structure made of an ever-changing group of water molecules. It does not exist as an entity in the classical Western sense; it exists only because of the flow of water through the stream. If the flow ceases the vortex disappears. In the same sense the structures out of which the biological entities are made are transient, unstable entities with constantly changing molecules dependent on a constant flow of energy to maintain form and structure (quoted in Callicott 1989, p. 90).

Events, which present themselves to experience as a kaleidoscopic flux, may nonetheless be sufficiently stable over sufficiently long periods of time that, in Colwell’s words, ‘patterns and regularities become evident amid the flux’ (1987, p. 108). Such patterns can be discerned at a variety of different levels. Whether we concern ourselves with a ‘cell’, a ‘tree’, or a ‘forest’ depends on the conceptual choices we make and our purposes in making them. We can describe a mechanical device or an organism, for example, not only in terms of the parts which compose them, but also in terms of the relations they have with other ‘objects’.

Objects can be epistemologically constructed, or ‘individuated’ to use Mathews’ term (1991, chap. 3), in any number of different ways. Since the world does not divide itself into discrete ‘essences’, objects cannot be unequivocally classified on the basis of certain essential characteristics which they presumably share. The difference between essentialist and constructivist thinking can be illustrated by comparing the Aristotelian and Darwinian accounts of biology. In the Aristotelian view, which makes a clear distinction between substance (or essence) and accident, organisms are classified on the basis of a predetermined scheme which delineates the characteristics an organism must have if it is to be an organism of a certain type. Organisms that do not have these characteristics either belong to a different type or are an abnormal, deviant manifestation of the type. Deviant organisms fail to fully manifest the characteristics of their type or, in Aristotelian terms, to fully realise their *telos*.

In the Darwinian account, however, which makes no distinction between substance and accident, types are not predetermined. Rather than divide organisms into discreet types, gradations are acknowledged; at times it is difficult to specify the precise borderline between one species and another. The generally accepted criteria are not based on the distinguishing features of the organisms in question but on whether or not they can interbreed. Deviation, which arises from genetic mutations, may be either positive or negative depending upon whether or not the change confers greater or less adaptive advantage to the organism. There is no predetermined teleological potential which organisms, or nature as a whole, must realise.

Mayr describes the difference between typologists (essentialists in our terminology) and populationists (constructivists in our terminology) as follows:

The populationist stresses the uniqueness of everything in the organic world. What is true for the human species – that no two individuals are alike – is equally true for all other species of animals and plants. Indeed, even the same individual changes continuously throughout its lifetime and when placed into different environments. All organisms and organic phenomena are composed of unique features and can be described collectively only in statistical terms. Individuals, or any kind of organic entities, form populations of which we can determine only the arithmetic mean and the statistics of variation. Averages are merely statistical abstractions; only the individuals of which the populations are composed have reality. The ultimate conclusions of the population thinker and of the typologist are precisely the opposite. For the typologists, the type (*eidos*) is real and the variation an illusion, while for the populationist the type (average) is an abstraction and only the variation is real. No two ways of looking at nature could be more different (1994, p. 158).

In the Aristotelian view a distinction between essence (i.e., substance) and accidents can be made, but in the Darwinian view this distinction breaks down – there are only accidents.

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Since how the world is to be talked about and how objects are to be categorised is not pre-given in experience itself, it is understandable why there should be such a high degree of conceptual pluralism across cultures (*cf.* Norgaard 1994, pp. 95–7; Evanoff 1997). While there is a virtually unlimited number of ways in which the world can be described and valued, and while these constructions vary from culture to culture, our constructions are nonetheless constrained by how the world itself really is. Hayles (1995), writing in opposition to postmodern, deconstructivist views of environmental philosophy (see also Soulé and Lease 1995; Rolston 1997), refers to this position as ‘constrained constructivism’. She notes, for example, that while our scientific understanding of gravity has changed (with the shift from Newtonian to Einsteinian physics) and while other cultural constructions of the same phenomenon may be possible (Native American cultures may explain it as Mother Earth calling to kindred spirits), ‘... no viable model could predict that when someone steps off a cliff on earth, she will remain spontaneously suspended in midair’ (1995, p. 52). While constraints will be differently understood in different paradigms, some constructions of the phenomena can be eliminated as simply unworkable. Despite cultural variability in how nature is understood and valued, our constructions can nonetheless be evaluated by the evolutionary-pragmatic criterion of how successfully they enable us to get along in the world (for a further elaboration of pragmatic approaches to environmental ethics see the essays in Light and Katz 1996).

While environmental problems can no doubt be socially constructed in a variety of different ways (*cf.* Yearly 1991; Martell 1994; Hannigan 1995), the adequacy of how well social and environmental problems are constructed can nonetheless be judged in part by how comprehensively they are understood, which involves extending our awareness and achieving a greater degree of objectivity. The company is attentive to its profits but not to the pollution it is spilling into the atmosphere. We solve the problem of local air pollution by building higher smokestacks but end up creating an ever bigger problem in the form of acid rain. Although a problem is technically not a ‘problem’ until it has been cognised as such, it is undoubtedly to our advantage to have as wide a grasp of our objective situation as possible and to formulate solutions which are holistic, rather than fragmentary or piecemeal, in approach.

*Constructivist ethics*

A constructivist approach to ethics sees ethics as arising out of the particular form of life shared by people within a given culture at a particular moment in history. As new forms of life emerge, new ethical principles and norms also emerge. When problems are shared across cultures, new ethical formulations are needed which not only take into account the differing forms of life of the respective cultures but are also able to effectively address the common problems they face. Ethical norms can be constructed which govern the behaviour of a

given society's members not only with respect to the relations they have among themselves (social ethics), but also with respect to the relations they have with people from other societies (intercultural ethics) and the relations they have with their natural environments (environmental ethics).

Since biology underdetermines how humans should act, ethics involves making choices between alternative courses of action which are not determined by nature. Making choices in turn involves trying to determine which courses of action should be taken and whether some courses of action may be better than others. While our choices may be constrained to an extent by our 'situatedness' in particular natural and social environments, we always have the capacity to reflect back on those environments and reassess how we will interact with them. It is largely the imaginative side of human experience that allows individuals to reflect back on their situation, formulate alternatives, and construct the norms that will govern their behaviour.

From a constructivist perspective no morality can be read directly out of nature. Constructivists can agree with Rolston's (1979) observation that there is an 'absolute' sense in which nature must be followed: all human activity is constrained by the laws of nature and there is nothing that we can do, despite any aspirations we may have to the contrary, which violates these laws. Nonetheless within the parameters set by nature itself, there is considerable room for choice with respect to the various kinds of life that it may be desirable or undesirable for humans to lead.

To an extent, of course, humans are biologically programmed to act in certain ways rather than others (to seek to provide themselves with food, water, and shelter for example), and there are certain biophysical processes which humans have no, or at best limited, control over (such as blood circulation, respiration, digestion, the elimination of wastes, reproduction, etc.). There are innumerable other areas in which behaviour is not biologically determined, however, and it is precisely in those areas where nature does not 'tell' us how to act that questions of what is good and what actions should be taken to realise the good arise. There is nothing 'in nature' which can unequivocally answer such questions for us, hence the need for ethical reflection. Although all humans are biologically required to eat, for example, the kinds of food that are eaten, how they are produced and distributed, the social circumstances in which they are consumed, etc. are all subject to choice and cultural variation, and are thus matters of ethical concern. Once social rules and practices have been established to deal with such situations, of course, they further constrain human behaviour. It is possible, however, for individuals to engage in critical reflection on social norms and to work to change them if they prove inadequate.

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*Guiding visions in ethics*

The reflective process involved in ethical decision-making can be broadly linked to what social ecology refers to as a harmonious synthesis of 'reason, passion, and imagination' (Clark 1993, p. 351). In the constructivist view precisely because there are no inexorable laws of nature or history which compel us to act in certain ways it is possible, indeed necessary, to formulate goals, both as individuals and as societies, which we might legitimately seek to achieve. The goals we decide upon become 'guiding visions' (Midgley 1994) which structure our present action. Plumwood (1993, p. 196) speaks similarly of 'guiding stories' and Norton (1991, p. 93) of worldviews as 'guides for action'. Guiding visions are themselves constructs, and they arise out of our ability to imagine both desirable and possible futures for ourselves.

When imaginative thinking is applied to a consideration of possible societies it becomes utopian. The utopian imagination allows individuals to construct new guiding visions of society, to rearrange institutions, to make plans and set goals, and so on. Guiding visions can be thought of as any set of shared objectives in any socio-political context, whether intra- or intercultural. Once we see that our present social arrangements are neither inevitable nor absolute but constructed and contingent, it is possible to imagine new futures for ourselves. Social movements, including the environmental movement, are essentially imaginative enterprises which critique existing practices and propose new ones (*cf.* Griffin 1996, p. 45). Social ecology similarly suggests that social and spiritual regeneration cannot occur apart from a liberation of the imagination; the creation of an ecological community is itself a 'work of art' (Bookchin, quoted in Clark 1992, p. 92). Combining imaginative thinking with a dialectical view of social transformation brings us very close to Murphy's concept of 'culturopoeia', which he defines as 'the imaginative and practical work of conceptualising and implementing new cultures' (1992, p. 314).

It is clear, however, that there can be a variety of different visions pursued by different societies and cultures. Guiding visions can thus be distinguished from the sort of Hegelian and Marxist metanarratives criticised by Lyotard (1979) because they assert neither a *single* direction of historical movement nor a *universal* plan for human society. They are contextual in reference both to particular historical periods and particular cultures, together with their attendant problems, although they can have both historical continuity with past traditions and be constructed across cultures if needed. For Midgley guiding visions denote a non-reductionist view of history which does not assume '...that the sole reality underlying history is a single, vast, hidden process, a process formally simple and accessible only by a single privileged thought-pattern' (1994, p. 40). Ebenreck (1996) contends that the use of the imagination in ethics can help us not only to empathise with others, including non-human forms of life, and to establish just relations with them, but also to construct 'cosmic stories' – a sort of MacIntyrean (1985) 'narrative unity' of the universe – which give meaning

and purpose to the otherwise brute facts of existence. Ebenreck specifically links imaginative thinking with the ability to envision a future sustainable society: a scientific understanding of sustainability can be supplemented by '...projecting new possibilities for human societies in their forms of interaction with the natural world' (1996, p. 16). Gare speaks of 'polyphonic narratives' which '... give place to a plurality of voices without presupposing that any of these have the one, true perspective' (1997, p. 13; see also 1994; 1995). Monological narratives assume themselves to present one true view of reality, but can only maintain this position through the suppression of alternative views. Polyphonic narratives avoid nihilism by allowing both a radical critique of monological narratives and the conscious construction of alternative visions for the future.

If guiding visions are not to be simply unrealisable fantasies, however, they must be grounded in the facts of the world and of human experience. Utopianism must be realistic (Giddens 1990, pp. 54*ff.* uses the term 'utopian realism') in the sense that it recognises the constraints imposed upon us by our natural and social environments. Moos and Brownstein describe the relationship between environmental science and utopian thought as follows:

[U]topists enter areas inaccessible to environmental science. They attempt to explore actively a future that has broken with past trends, a future that cannot be predictably plotted. This is a unique type of exploration, for utopists create what they 'discover' ... In performing these acts of social creation, utopists initially move beyond the limits of science. They embrace the imagination and focus on the openness of the future rather than on the constraints of the present. But this divorce between science and imagination can never be total. The utopist's imagination must be tempered by reason. He cannot suggest that everything is possible, that all boundaries can be crossed, that every obstacle can be overcome. Utopia cannot be pure fantasy ... The world transformed is still the world, a finite place, a realm of physical and social environmental limits (1977, p. 241).

Since science cannot tell us how we should interact with the natural environment or with each other in society, we are obliged to make qualitative judgements about how such interactions will be conducted. Such judgements can and must take advantage of the empirical claims of science, but there is also a need for critical reflection on the values which inform our decisions about the directions cultural development will take. In contemporary industrial cultures more attention is typically placed on the accumulation of scientific knowledge in the service of unquestioned social and cultural goals, with insufficient attention being given to critical reflection on the values which inform these goals. The question of values, however, is one that cannot be avoided if we are to make informed and intelligent choices about the future. By avoiding questions of value we merely lend support to the status quo and fail in our imaginative ability to propose viable alternatives.

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Even if the guiding visions we choose for ourselves are not completely implemented they nonetheless function to give directionality to action and provide the standard against which progress can be measured. Such values as justice, freedom, equality, democracy, and so forth may be ideals worth striving for even if we never completely realise them in society. It is a mistake to think that a utopian social order must be perfect rather than simply adequate. Sylvan and Bennett (1990) refer to this as the 'maximisation claim' and argue that it is possible for conceptions of 'well' and 'good' to fall short of absolute perfection; 'healthy', for example, may mean that a person is in good general health, not that he or she is ideally fit and incapable of any improvement. The perfectionist strain in utopian thought is what leads many people to regard it as 'nice in theory but unachievable in practice'. Consistent with a pragmatic outlook that abandons any claims to absolute truth or absolute morality we should settle for a concept of sufficiency (what Sylvan and Bennett call 'good enough'). The concept of sufficiency introduces an element of dynamism and humility into social practice: if we ever do think we have reached perfection, we can smugly resist any further calls for change or progress.

It is also a mistake to think that utopian thinking involves the positing of a single vision of the future, or what Sylvan and Bennett (1990, pp. 10*ff.*) refer to as 'monism'. The monist claim is based on what we take to be the essentially realist supposition that there is only one 'correct' way of ordering society or that 'human nature' dictates certain social arrangements rather than others. From a constructivist point of view these suppositions are, as we have argued, unfounded. Social arrangements arise out of human choices and these choices are underdetermined by either nature or biology. There are only various possibilities for action, some of which are selected over others. Of those courses of action that are selected some prove viable and others do not. There can thus be a great deal of cross-cultural variety in how utopian societies are conceived and implemented.

It cannot be determined in advance exactly how different cultures will work out their own guiding visions for the future. These depend upon the interaction between two variables: the objective possibilities provided by environments and the subjective aspirations of the people inhabiting those environments. The very notions of choice and public debate preclude the possibility of there being a 'master plan' which will be suitable in all locations and for all people. Utopian thought can only set forth certain general parameters within which a great deal of variety is possible. The notion of a 'master plan', besides thinking that one set of answers fits all contexts, assumes that human consciousness can effectively deal with complexities that are probably in fact beyond its capacities. Marshall writes, 'Ecotopia is not intended as a blueprint. All social blueprints are absurd since they deny spontaneity and creativity. It is up to free people to create their own free society' (1992, p. 448).

Nonetheless, the notion of a ‘free society’ does not mean a society without order or structure, but rather a society that has been freely chosen by the people who live in it. A distinction can be made between a totalising approach to ethics which compels consent to a presumed ‘universal’ metanarrative of how society should be and a constructivist approach which attempts to arrive at a conception of an ideal society through free and open dialogue among the parties concerned (cf. Habermas 1990; 1993; Dryzek 1997). In the former case the vision arrived at is presumed to be fixed and final because it is grounded in either natural or historical inevitabilities. In the latter case, precisely because the constructed nature of guiding visions is recognised, they are able to creatively evolve in response to new situations. Utopian thought, therefore, is not deterministic (this is the way the world must be because nature or history tell us so) but constructive (this is the way the world could be if we commit ourselves to its actualisation).

#### CONSTRUCTIVISM AND THE AUTONOMY OF NATURE

##### *Constructivism and dialectics*

One legitimate reservation about more idealist versions of constructivism is that nature may come to be regarded as ‘nothing more than’ a social construct, something to be used and exploited entirely for human purposes. There are, however, good reasons for thinking that we are not free to ‘socially construct’ nature in any way we like. While some constructions will increase the prospect for long-term human flourishing, others will diminish it. Moreover, how humans interact with the natural environment can either enhance or diminish the prospects for the long-term flourishing of nonhuman lifeforms. We can speak, then, of the moral obligations humans have both to *conserve* nature to maintain human life and to *preserve* nature in a way that maintains biodiversity and does not impede ongoing evolutionary processes.

Unlike Aristotelian approaches (cf. Nussbaum 1993), which seek to establish an essentialist definition of human flourishing (*eudamonia*), what constitutes ‘flourishing’ from an evolutionary-pragmatic perspective can be seen as developing out of the specific forms of interaction people have with both their natural environments and their social environments; they are therefore subject to evolutionary and cultural variation and change. Flourishing cannot be treated in isolation from the particular societies and environments individuals inhabit. In the same way that an individual’s physiological needs cannot be satisfied except in the context of a good environment, so too can an individual’s psychological needs not be satisfied except in the context of a good society.

The fact that humans and nature interact with each other in reciprocal ways suggests that the relationship between them is best characterised in dialectical terms, which sees knowledge, value, and ethics as developing out of direct interactions with a materially real world existing outside of human consciousness.

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The term *dialectics* can be used in a variety of ways and at a variety of different levels (*cf.* Simon 1990). Broadly speaking, dialectics refers to any situation in which two (or more) things interact with each other to produce something which combines aspects of both but is nonetheless different from either of the original interactors and therefore genuinely novel. At the material level dialectics can refer, for example, to two chemicals which interact with each other to produce a new compound, to the various interactions between organisms and environments which set evolutionary forces into play (dialectical biology; see Levins and Lewontin 1985), and to historical interactions between various forms of social life which lead to the creation of entirely new social arrangements (dialectical materialism). Bookchin uses the term 'dialectical naturalism' to refer to an immanent process of self-development which results in '...the full actualisation of potentiality in its rich, self-incorporative "stages" of growth, differentiation, maturation, and wholeness' (1995, p. 123). From a dialectical perspective, individuals can be seen in relational terms as both constituting and being constituted by the natural and social environments they inhabit (Weichhart 1993 uses the term *transactionalism* to refer to this same basic approach).

At the conceptual level, dialectics refers to the process by which competing ideas in areas of knowledge, value theory, ethics, and so forth are subjected to reflective criticism and recombined in novel ways. Dialectics also relates to the various ways in which conceptual constructs and material reality interact with each other. The facts and values humans construct are influenced, although not exclusively determined, by the interactions they have with their natural and social environments. Conversely, how the world is conceptualised has a significant influence on how we interact with the world, and how we interact with the world in turn has an influence on what the world itself becomes. Cultural constructions are not purely subjective or arbitrary, therefore, precisely because they result in objective transformations of the world.

Dialectical thinking is developmental and process-oriented, and thus more concerned with *becoming* than with *being*. It cannot, therefore, be reduced to analytical forms of logic based on the principles of identity and non-contradiction. While both Aristotelian and modern formal logic are useful tools for analyzing entities and relationships which are regarded as more or less fixed and unchanging, they are less able to explain the process by which *A* becomes *B* and to show how concepts which on the surface appear contradictory might be reconciled. Dialectical thinking aims not only at a highly differentiated (i.e., analytical) view of reality, but also at a more highly integrated (i.e., synthetic) perspective. Instead of simply breaking the world down into smaller and smaller parts, it also attempts to investigate how 'things hang together'. Since no part ever exists in total isolation from other parts but is instead interrelated with them, a part can never be understood in isolation from the relations it has with other parts.

Marietta's (1988; 1995) concept of 'critical holism' can be interpreted as an attempt to apply a form of dialectical reasoning to ethics. Critical holism is based on the idea that '[a]n ethical system needs to take into consideration everything that can be morally relevant' (Marietta 1988, p. 257). The concept of 'critical holism' can be extended to refer to any form of dialectic reasoning, whether in epistemology or ethics, which moves outward from particulars in the attempt to reach a wider, more comprehensive view of the whole. Critical holism can be distinguished from conventional holism, in that while the former considers parts in relation to wholes (and vice versa), the latter simply privileges wholes over parts. Conventional holism assumes that the knowledge it possesses is indeed a complete knowledge of the whole; it is therefore static and unable to account for change and development except as a movement towards certain fixed and predetermined goals it presumes to have advanced knowledge of.

Critical holism, to the contrary, acknowledges that because we can never know how all the parts of a given whole actually fit together, and perhaps not even how far the limits of the whole extend, we can in principle never have absolute knowledge of the whole. As situated human beings we never have privileged access to a God's eye-view of the whole and there are, moreover, no predetermined goals which it is possible for us to have advanced knowledge of; the future is open-ended. Since a complete understanding of the whole is unobtainable by virtue both of the breadth and complexity of the world and of our experience of it, it can be concluded that the dialectical process itself is an open-ended one which can never regard itself as finished; any system of thought or ethics which regards itself as 'finished' is no longer able to account for change and development. Achieving a more holistic perspective does not imply, therefore, imposing a single 'totalising' vision on the whole of humanity or nature; rather it means recognising the extent to which our view of the world is always limited and incomplete, and thus subject to revision in light of new experiences.

#### *Vogel's version of constructivism*

The dialectical version of constructivism developed here can be contrasted with the more idealistic version of constructivism advanced by Vogel in *Against Nature* (1996). Vogel adopts an essentially Hegelian approach to the philosophy of nature, which denies the reality of nature as a 'thing-in-itself', i.e., as having any external reality apart from how it has been socially constructed. Since Vogel sees nature as constituted by social practices, he regards the 'natural' and the social as ontologically inseparable. On the basis of this ontology Vogel proceeds to develop a critical theory of nature which entertains '...the hope that humans could take responsibility for the world they inhabit instead of believing that world to be determined by external forces they are unable to control' (1996, p. 9). While such a view has the merit of encouraging humans to take responsibility for how

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they act in relation to nature, it nonetheless includes a considerable amount of hubris in its implication that humans can successfully control the whole of the natural world. An alternative, dialectical approach which accepts the reality of nature apart from how it has been socially constructed suggests that the goal of environmental policy should not be to attempt to manage and control the whole of nature, but rather to allow nature to retain a measure of autonomy, including areas which are simply left alone.

Vogel delineates four different senses in which nature can be said to be socially constructed. First, according to Vogel, the world that we inhabit is literally constructed in the sense that it is constituted by physical objects that have been humanly produced. The realm of the social cannot be separated from the world of objects but rather exists in and through those objects. Second, the world is socially constructed in the sense that social processes are responsible for actually producing the objects that constitute the *Umwelt*. There are no physical objects in the *Umwelt* that are not socially produced. Third, what we take to be nature in the sense of 'wilderness' is also socially constructed. On the one hand, most so-called 'natural' environments have been shaped to at least some degree by human intervention (*cf.* Cronon 1996); on the other, even so-called 'wilderness areas' only exist because of social decisions to preserve them. Fourth, nature is socially constructed in an epistemological sense: 'Scientists have no access to nature "in itself" but rather act within a "view" of nature that they themselves have a central role in generating, through their theories, their language, and above all their practices' (Vogel 1996, p. 38).

In an effort to further clarify the dialectical version of constructivism defended here, each of these arguments will be looked at in turn and counterarguments will be offered which attempt to show that while nature is indeed partly socially constructed, there are also aspects of nature which remain beyond human knowledge and control, and which can therefore be regarded as autonomous.

*The social construction of physical nature*

Vogel's first two senses in which nature can be said to be socially constructed superficially resemble the duality implicit in the dialectical model; i.e., on the one hand, society is constituted by nature in the sense that the built environment is constructed out of natural resources provided by nature and, on the other, nature is constituted by society in the sense that the built environment, together with the natural environment, make up what can be regarded as the environment as a whole. The difference between Vogel's approach and a dialectical approach is that, for Vogel, the relationship between nature and society is not in fact a genuine duality but rather a monism in which the social is simply identified with the natural. Vogel writes, '... the *Umwelt* that surrounds us, cannot be neatly divided into the "social" and the "natural"; we live in one world not two' (1996, p. 36). This monism collapses, however, once it is recognised that while

all human artefacts are indeed constituted by nature, not all that can be called nature is constituted by human artefacts. Vogel confuses the part for the whole. There is thus a sense in which the natural can be said to transcend the social – an area of ‘autonomy’ that is beyond human management and control and that can properly be referred to as ‘wild’. Similarly, society is also ‘autonomous’ in the sense that how the world is does not determine how society must be; as was argued earlier in this paper, within the parameters set by nature a variety of different societies can conceivably be constructed.

The dialectical approach is neither dualistic nor monistic. Dualistic conceptions of the relationship between humans and nature simply set the human and the natural in opposition to each other and fail to note the various ways in which the two interpenetrate one another. Monistic conceptions, on the other hand, absorb the human into the natural (as with Romanticism, neo-primitivism, and some traditional views of the ‘oneness’ of humanity and nature) or the natural into the human (as with Disneyesque artificial environments, virtual reality, and some contemporary views of the ‘oneness’ of humanity and nature). Monistic theories, of which Vogel’s is a type, fail to note the various ways in which the human and the natural remain autonomous from one another.

Rather than dichotomise humanity and nature (as with dualistic theories) or identify humanity and nature (as with monistic theories), a dialectical perspective suggests that while nature does indeed provide the material resources that sustain human life, culture is neither determined by nature nor does it need to subsume the whole of nature to sustain itself. Nature is constituted by human culture in the sense that human interactions transform and modify the natural environment in significant ways, but natural processes nonetheless can and do continue in the absence of human interaction, suggesting that a measure of autonomy for nature can and should be both preserved and respected. Thus, while humans both constitute and are constituted by the natural environment, they neither constitute nor are constituted by the *whole* natural environment. Similarly, while the built environment both constitutes and is constituted by the natural environment, it neither constitutes nor is constituted by the *whole* natural environment.

The fact that some parts of nature are socially constructed in a material sense does not imply that humans can interact with their natural environments on the basis of arbitrary choices; rather, it implies that humans must take responsibility for the consequences their actions have on nature. Vogel’s attempt to formulate an ‘ethics of the built world’ (1996, pp. 165ff.) can only succeed by defining the whole of nature as ‘built’; those aspects of the natural environment which stand outside of human interaction and control are simply ignored, suggesting that Vogel’s ethic is of insufficient scope.

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*The social construction of wilderness*

Vogel's third sense in which nature can be said to be socially constructed is the view that wilderness itself can be regarded as a social construct. It can be readily acknowledged that humans have attempted to extend their control over those aspects of nature that remain 'wild' – to 'humanise' the oceans, the atmosphere, and the cosmos beyond, as Vogel writes. The question for environmental ethics, however, is not *whether* humans should attempt to modify their natural environments, but rather *how* and to what *extent* humans should seek to modify their natural environments. Humans unavoidably modify their natural environments by their very presence in those environments; they appropriate resources found in nature to sustain human life and create particular forms of culture. Obviously, however, human life can be sustained and forms of culture created which do not require humans to control and manage the *whole* of nature. The ethical question can be recast, then, not to ask how nature should be managed or preserved, but rather to ask what forms of culture can be created which allow both for human flourishing and for the flourishing of nonhuman forms of life. Asking the question in this way reconciles the anthropocentric/conservationist with the ecocentric/preservationist streams of environmental ethics.

From a dialectical perspective the preservation of wilderness areas does not involve an attempt on the part of humans to *manage* wilderness areas, but rather an attempt to intentionally limit the extent to which humans interfere with nonhuman lifeforms. Since the whole of nature is not needed to sustain human life, there is no justification for attempting to manage the whole of nature, even when this is done for sincere motives, as with the 'stewardship' model of environmental ethics which places responsibility for the care of nature squarely on the shoulders of humans (see, for example, Attfield 1983). Since no human understanding of nature ever fully exhausts what nature 'really is', it is impossible to think that we understand nature well enough to manage the whole of it. We are not and cannot be required to manage the whole of nature but only those parts of nature that provide the necessary resources for human well-being. The rest can be left alone.

What humans should take responsibility for, then, is not nature itself but rather their own actions with respect to nature. Environmental ethics should, therefore, refocus its attention away from nature itself and back to human actions and the decisions which inform them. There is no need to 'manage' nature, only a need to manage our own affairs in a way that preserves the autonomy of nature; nature is fully capable of managing its own affairs in the absence of (often irresponsible) human intervention. The problem is not so much trying to come up with arguments which show why nature should be preserved, but rather with asking what forms of human intervention in the natural world are justified.

*The social construction of knowledge about nature*

The fourth sense in which Vogel thinks nature is socially constructed is the view that all knowledge of nature is a product not of 'how nature is' but of social practices. Vogel specifically links this conclusion to a postpositivist philosophy of science. In Vogel's view,

The 'nature' we want to get to, the ultimate immediacy, is always deferred, always subject to a further deconstruction into the social ... We are left, frustrated, with...nature as an unconstructed immediacy whose existence we almost obsessively feel the need to assert but which we find ourselves amazingly unable to say anything about (1996, pp. 38-39).

Put differently, whatever we *do* attempt to say about nature must be recognised as a social construction which does not capture nature in its 'unconstructed immediacy'.

While it can be agreed that any attempt to *talk* about the world in human language involves social construction, it is nonetheless possible to suggest that a great deal of our experience of the world is direct and unmediated through linguistic or other conceptual categories, and therefore not completely a product of social construction. Evernden, whose work is deeply informed by a constructivist perspective, nonetheless concludes that a measure of 'wildness' can be reclaimed in prelinguistic encounters with nature:

To return to things themselves is to observe them *before* they were 'nature', that is, before they were captured and explained, in which transaction they ceased to be themselves and became instead functionaries in the world of social discourse. Once named and explained, they become *social* creations, and their primordial givenness is subordinated to their social utility (1992, p. 110).

The idea of 'primordial givenness' expresses the ultimately apophatic character of the human encounter with nature, what Manes (1992) refers to as the 'silence of nature'. It is primarily through such encounters that the autonomy of nature, prior to its social construction, can be appreciated.

Realism, in the sense just discussed, is a valuable antidote to idealistic theories such as Vogel's, which simply identify the world as it is known with the world as it is (*cf.* Vogel 1996, p. 24: 'the world we know is the only one there is'). If a legitimate distinction can indeed be made between nature 'as it is' and nature as it has been 'socially constructed', then it is also possible for there to be 'cognitive maladjustments' (Goldsmith 1992, p. 248) between the two, which may cause humans to interact with nature in ways that are harmful both to themselves and to other species. Such maladjustments involve an incongruity between human beliefs about the world (both facts and values) and the way the world really is. Rappaport (1979) refers to belief systems (including both knowledge and values belief systems) as 'cognised models', and argues that they should be evaluated not in terms of how accurate a picture of the world they give us, but

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rather in terms of their 'adaptive effectiveness', that is, '...the extent to which they direct behaviour in ways that are appropriate to the biological well-being of the actors and of the ecosystems in which they participate' (1979, p. 98). The parallel with pragmatism is obvious.

The following passage brings together several key themes in the constructivist position:

Nature is seen by humans through a screen of beliefs, knowledge, and purposes, and it is in terms of their images of nature, rather than of the actual structure of nature, that they act. Yet, it is upon nature itself that they do act, and it is nature itself that acts upon them, nurturing or destroying them. Disparities between images of nature and the actual structures of ecosystems are inevitable. Humans are gifted learners and may continually enlarge and correct their knowledge of their environments, but their images of nature are always simpler than nature and in some degree or sense inexact, for ecological systems are complex and subtle beyond full comprehension (Rappaport 1979, p. 97).

Following Rappaport we can claim, then, that human beliefs which come into conflict with how the world actually is can be regarded as 'bad' in the minimal sense that they are maladaptive.

For Rappaport, cognised models based on mythological views of the world and indigenous knowledge systems may prove to be more adaptive than those based on modern science. The same claim can be made for non-Western, indigenous knowledge systems (*cf.* Johnson 1992; Warren, Slikkerveer, and Brokensha 1995; Blunt and Warren 1996; Brush and Stabinsky 1996). This view should not be taken, however, as a denigration of science itself. The problem in modern industrial cultures is not necessarily with science *per se*, but rather with a value system which is based on contradictory and unrealisable goals. The 'cognised model' of the modernist industrial paradigm is maladaptive precisely to the extent that it is based on unsustainable levels of resource consumption and waste generation. The goal of achieving high levels of material affluence for a growing population is not only unrealistic but, if pursued, may lead to the exactly opposite outcome: declining levels of material affluence, increased misery and death, higher levels of social injustice, and a devastated environment.

Even though nature may be socially constructed to the extent that it is 'named and explained', there is no reason why such constructions need to be accepted simply as they are. If, as we have argued, our ideas about nature are formed both through direct contact with nature and through social constructions available in our own and other cultures, no constructions, whether individual or cultural, are immune from further criticism. While we are socialised into adopting certain conceptions of nature and while many individuals unthinkingly accept such conceptions as 'true' without questioning them, there can nonetheless be a dialectic in which individuals challenge those constructions by stepping outside of them and looking again directly at the phenomenon itself. The fact that nature

is 'socially constructed' does not obviate the need to reevaluate, and perhaps revise, our constructions in light of experience.

Vogel ultimately seeks to develop a communicative theory of nature based on a refinement of Habermas's discourse ethics which suggests that while natural entities cannot be the *subjects* of morality (i.e., they cannot meaningfully participate in moral discourse), they can nonetheless be the *objects* of morality. Vogel writes, '... to assert that *value can be determined only by humans* is not to assert that *only humans have value*' (1996, p. 164). This claim seems perfectly acceptable. It can be further agreed that the process of constructing 'guiding visions' for how humans interact with natural environments is primarily social and communicative. Whereas Vogel argues, however, 'that "nature" and "objectivity" are socially constituted' (1996, p. 151), it can be suggested that the development of a communicative ethic adequate to address environmental concerns must involve not only a social process for reaching intersubjective agreement between individuals, but also a process for testing the viability of intersubjective agreements against the objective situation individuals find themselves in. The details of how a communicative ethic might be developed along these lines require further consideration, but it should be readily apparent how this initial formulation combines both moral constructivism and ontological realism. Morality cannot be 'read' directly out of nature, but is rather the product of a constructive process in which individuals attempt to reach intersubjective agreement on how the external world of nature should be both construed and acted in.

## CONCLUSION

It is precisely because the beliefs and values we have with regard to nature are not derived from nature itself, but are rather constructed, that they can be reconstructed in ways that enable us to comprehend the world better and interact with it more successfully. Since our constructions are always a simplification of the reality they purport to cognise, there is always a realm beyond them which remains autonomous and beyond their grasp. Establishing an ethical relationship between humanity and nature thus requires a dialectical perspective which acknowledges the various ways in which each is dependent upon the other, while simultaneously providing each with an appropriate measure of autonomy.

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