T. D. J. Chappell, ed. **The Philosophy of the Environment**
Edinburgh: University of Edinburgh Press, 1997.
www.euppublishing.com

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NATURE FOR REAL: IS NATURE A SOCIAL CONSTRUCT?

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Six words are especially significant in our world-view; they model the world we view: (1) 'Nature'; (2) 'Environment'; (3) 'Wilderness'; (4) 'Science'; (5) 'Earth' and (6) 'Value' as found in nature. But how far are these words for real? Have they extensions to which their intensions successfully refer? "The world' is variously 'constituted' by diverse cultures, as we are lately reminded, and there is much doubt about what, if anything, is 'privileged' about the prevailing Western concepts. All words have been made up historically by people in their multifarious coping strategies; these six now have a modernist colour to them, and the make-up of the words colours up what we see.

More radically, all human knowing colours whatever people see, through our percepts and concepts. Trees are not really green after we have learned about electromagnetic radiation and the optics of our eyes, though we all view the world that way. Indeed, the scepticism runs deeper. Many question whether humans know nature at all, in any ultimate or objective sense (the pejorative word here is 'absolute' comparable to 'privileged' as revealing our bias in 'right' or 'true'). Rather we know nature only provisionally or operationally ('pragmatically' is the favoured word). We will first look in overview at the tangle of problems in which these words are caught up, then turn to each word in more detail.

Natural science seems a primary place where humans know nature for real; that couples the first and the fourth of these signifying words, with epistemic success. No, some reply, humans know nature through socially-constructed science. Catherine Larrère claims that nature *per se* 'does not exist. . . Nature is only the name given to a certain contemporary state of science.'[1] Science exists – no one doubts that – but science knows nature conditionally, perhaps phenomenally; science is an interaction activity between humans and a nature out there that we know only through the lenses,

theories and equipment that we humans have constructed. Science does not know an unconditioned nature objectively, or noumenally, certainly not absolutely. Alexander Wilson claims: 'We should by no means exempt science from social discussions of nature … In fact, the whole idea of nature as something separate from human existence is a lie. Humans and nature construct one another.'[2]

Turn then to the more modest word 'environment'. Surely humans know a local external environment; that, after all, is what environmentalists are trying to save. Be careful, though, warns Arnold Berleant:

> I do not ordinarily speak of 'the' environment. While this is the usual locution, it embodies a hidden meaning that is the source of much of our difficulty. For 'the' environment objectifies environment; it turns it into an entity that we can think of and deal with as if it were outside and independent of ourselves … 'The' environment [is] one of the last survivors of the mind—body dualism ... For there is no outside world. There is no outside . . . Person and environment are continuous.[3]

Environments are horizons that we carry about and reconstitute as we move here and there. Objectively, there are no horizons in nature.

Try again. 'A wilderness, in contrast with those areas where man and his works dominate the landscape, is hereby recognized as an area where the earth and its community of life are untrammeled by man, where man himself is a visitor who does not remain.'[4] That seems to take people out of the picture. Alas, once more – so the self-conscious humanists will protest – we are still very much in the picture. Roderick Nash, tracing the history of *Wilderness and the American Mind*, reaches a startling conclusion: 'Wilderness does not exist. It never has. It is a feeling about a place ... Wilderness is a state of mind.'[5]

That seems extreme; still, wilderness does have to be designated, as it has been by the US, Congress. A society has to decide what wilderness means and where they will have it. Wilderness is another one of Berleant's human environments, even though one about which we have made atypical designations, resolving to leave such areas untrammelled. 'Wilderness' is a foil we have constituted in contrast to late twentieth-century, Western, technological culture. Nash concludes: 'Civilization created wilderness.'[6]

Apparently, then, we are going to have to look all over the world, the Earth, to find nature for real. No, the search is impossible — the objectors continue — because the problem is not what we are looking at, some world-Earth, it is what we are looking with, a world-view: our reason, our culture and its words. We must not think, warns Richard Rorty, that 'Reason' offers 'a transcultural human ability to correspond to reality'; the best that reason can do is ask 'about what self-image society should have of itself.'[7] The big mistake is 'to think that the point of language is to represent a hidden reality which lies outside us.'[8] Jacques Derrida's remark, 'There is no outside-the-text,' by this account, forbids any correspondence theory of truth.[9] We can hardly have descriptions, much less valuations, of nature as it lies outside of us. That is 'the world well lost'.[10]

Philosophers have perennially found themselves in an epistemic prison, as every freshman discovers early in the introductory course. There is no human knowing that is not looking out from where we are, using our senses and our brains, from an anthropocentric perspective. That is the lesson of Plato's myth of the cave from ancient Greece, or the tale of the blind men and the elephant from India. These fables, all over again (so they say), enshrine the deepest truth of all: all knowledge is relative; there is no 'mirror of nature'.[11] Viewing one's world, the realist hopes 'to detach oneself from any particular community and look down at it from a, more universal standpoint.'[12] This can't be done. Hilary Putnam explains to us 'why there isn't a ready-made world.'[13]

Yes, but at least there are those magnificent pictures of Earth taken from space, and the conviction returns that we humans can look over the globe at least, and find a world that had 'already made' itself. We ourselves are part of its making, whatever making up we do after we arrive and turn to view it. Using our 'reason', somewhat trans culturally it would seem,[14] perhaps we can couple the question what self-image our society wishes to make of itself with what to make of this planet we find on our hands, imaged in those photographs.

So there is an epistemic crisis in our philosophical culture, which, on some readings, can seem to have reached consummate sophistication and, the next moment, can reveal debilitating failure of nerve. We need to ask, in theory, whether nature is for real to know, in practice, whether and how we ought to conserve it. Mirrors or not, the self-image question is entwined with the image of nature.

Environmental ethics is said to be 'applied philosophy' (sometimes with a bit of condescension), yet it often probes important theoretical issues about nature, which (we add with matching condescension) has been rather mistreated in twentieth-century philosophy, overmuch concerned with the human self-image. Is environmental philosophy another of those para-professional 'philosophy and . . . ' spinoffs, not really philosophy *per se*, only philosophy *'ad hoc'?* Yes, but philosophy is always philosophy of X: and if the object, X, is 'nature' described and evaluated, is not such enquiry axial philosophy, right at the centre?

Now we reach the sixth, and most loaded, of our appraisal words. Surely, comes the retort 'value' is something we humans impose on the world. Nature may be objects there without us. There may be a ready-made world, but human values are not found ready-made in it. We make up our values. But not so fast: perhaps we humans do find some non-human values, or some of our values already made up, in the evolutionary history of our Earth, or our ecology. We ought not to beg that question.

After all, the less we really know about nature, the less we can or ought to save nature for what it is in itself, intrinsically. Indeed, if we know that little, it may be hard properly to value nature even instrumentally. We cannot correctly value what we do not to some degree correctly know. Even if we somehow manage to value wild nature *per se* without making any utilitarian use of it, perhaps this valuing project will prove to be a human interactive construction. Such value will have been projected onto nature, constituted by us and our set of social forces; other peoples in other cultures might not

share our views. They too will project greenness onto trees; they might, nevertheless, value them in other ways, perhaps as natural classics, perhaps as the abode of spirits, perhaps as cellulose for technology. But then, if none of us knows nature for real, who is to say that any of these valuations is privileged? The conservation project falls to the whims of these ambiguous social projections – different strokes for different folks. The epistemic crisis is as troubling as the environmental crisis, and one must be fixed before the other can.

NATURE

'Nature' is a grand word; the root lies in the Latin *natus* or *gnatus*, 'being born' or 'produced', related to the Greek, *gignomai*, 'to be born', roots that survive in 'pregnant', 'genesis' and 'native'. Nature is whatever has been generated and comes to be.[15] The reference is more or less to all that there is; the contrast classes are perhaps the super-natural, also, on some meanings, the cultural, the artifacted world as this has remade the spontaneously wild. For metaphysical naturalists, the non-natural or unnatural is an empty set. Whatever is, is natural.

The scope is just the problem. One cannot refer to everything and get any meaningful work done with words. What 'nature' means takes on the particulars of the occasions of reference, and these are, the linguists will speedily remind us, as much generated in the mind of the speaker for the uses at hand as found in the external world. One cannot encounter (see, hear, taste, touch or feel) nature-as-a-whole, only more or less specific processes or products that come to focus out of the whole, such as a lion or the rain. These natural 'objects' always show up when we are in some relation to them, constituting these relationships. We have names for these particulars within grand nature, and these names figure into a bigger picture. Lions will mean one thing to an ecologist, something else to a tourist, still something else to tribal Africans who see their totem animal. Rain on the Serengeti is a hydrological phenomenon to a meteorologist; rain is an answered prayer to the Islamic herdsmen troubled with drought and starving cattle.

'Nature' has to be abstracted out of this blooming, buzzing confusion of myriads of encounters with whatever is actually out there, which nobody fully, 'absolutely' knows. 'Nature,' the one word, singularises the variety of phenomena, and soon metaphysics comes trailing in. Metaphysically, there are, of course, differing conceptions of nature. Materialists have one, Christians another, Buddhists still another; the Druid concept of nature is *this* way; Einstein's is *that* way, seen quite differently. Nature is a loaded word, as is revealed by the metaphors that have been used to describe it: the creation of God, the Great Chain of Being, a clockwork machine, chaos, an evolutionary ecosystem, Mother Nature, Gaia, a cosmic egg, *maya* (appearance, illusion) spun over *Brahman*, or *samsara* (a flow, a turning) which is also *sunyata*, the great Emptiness, or *yang* and *yin* ever recomposing the *Tao*. 'Nature' is not so much anything out there as a category we have invented into which to put things; and we reinvent the category with our shifting models that describe this collection called 'nature', depending on the mindset of the beholder.

Neil Evemden concludes, 'What we know as nature is what we have *constituted* as *nature',* that is 'the social creation of nature'.[16] He elaborates:

> It is fair to say that before the word was invented, there was no nature. That is not, of course, to suggest that there were not the entities and phenomena we now attribute to nature, but rather to say that people were not conscious of there being any such entity as 'nature.' For nature is, before all else, a category, a conceptual container that permits the user to conceive of a single, discernible 'thing.'[17]

'It is our habit, and perhaps an inevitable one,' he continues, 'to subsequently construe nature as the *source itself.* Yet nature is not the well, but the bucket, and a leaky one at that.'[18]

Yes, but 'nature' is a category we invent and put things we meet into, because there is a realm out there, labelled nature, into which things have been put before we arrive. Leaks or not, we do catch things in our buckets that come from some source out there. Nature is what is *not* constructed by the human mind. We can, through various constructs of the human mind, find out things that are not created in the human mind. Anyone who thinks that there is any knowledge of the material world believes that; no one can survive without considerable success in knowing what is out there in the world he or she must move through. All those persons who did not think that 'lion' refers to a real predator lurking in the grass are extinct. 'Nature' is a generic word for these objects encountered and the forces and processes that produce them.

Well, yes, perhaps 'lions' are out there, but 'nature' is not. The word 'lion' has reference but what is the reference of 'nature'? Many will think that of these concepts of' 'nature' some are better, some worse: almost nobody any more is a convinced Druid; botany books are pretty standard the world over; Einstein is universally praised for his insights deep into the nature of reality. So we in the West have what concepts we now have as a result of the testing and sifting of the ideas generated in human experience encountering nature over the millennia and around the world; therefore the prevailing ones are true, or at least truer to the world than the concepts they have replaced.

That claim, metaphysically, is hard to press, however, because there is little or no consensus on what nature ultimately is. Here the seeming successes of science, in botany for instance, seem to run out at the bottom of physics. Nature is quarks, or gluons, or the bottomless energy pit out of which all comes, or the outflow of the Big Bang, and the ultimate questions are left as open as ever. Metaphysicians, so far as these still remain, construct diverse meanings of' 'nature', and all we really have for sure is these human relations with 'nature', including the scientific ones. 'Nature' is something out there behind the sensations, never nakedly, wordlessly known.

An environmentalist, however, need not be quite so metaphysical, at least not so cosmological. A global view will do; maybe zoology, botany, geology, meteorology and ecology, if we can get these evaluated. This seems an order of magnitude away from astronomy and astrophysics above us, with the atomic and subatomic yet another order of magnitude below us, and we earthlings might be better at epistemology and get the ontology right at these native ranges. On Earth, nature is natural history, and

no one has any real doubt that there are lions and trees, mountains and rivers, fauna and flora.

If we set aside the deep metaphysics, can we not be local realists enough to speak of nature not just here with us but also out there, or, more accurately, since the world is a plural place, of various natures out there? This knowing of various things in nature, and their natures, will be relational, for, after all, we humans too live here on Earth, are among its residents, and we have to cope. Are these not relations with others, genuine others, whom we can know as being there in themselves? Further, these others are together in ecosystems, in which they have evolved and are maintained; and can we not place these others in a self-organising system out there for which 'nature' is a rather good word?

The word 'nature' arises in our language, constructed by humans, because we need a container matching this world that contains all these myriads of creatures and phenomena we encounter, lions and five million other species, and mountains, rivers and ecosystems. There may be something to be said for giving up ultimates and absolutes, noumena and essences, or even quarks and superstrings, and certainly the vocabulary we use is one we humans have constructed. But do we really want to give up discovering how nature, at least at the scales we inhabit on Earth, does things on its own, did so before we arrived, and continues to do so when our enquiry is leaving them alone?

We cannot think about anything without language, and in language we can only use meanings that the wordsmiths of our past have forged for us. Yes. We need to think about language, about the concept of 'nature'. But this does not mean that we cannot think with such words about the world. There is always some sort of cognitive framework within which nature makes its appearance, but that does not mean that what appears is only the framework. Maps map the world; they selectively represent some of it, and 'nature' refers to this world-making activity out there. 'Nature', if a category ('bucket') we have constructed, has real members, that is, things that got there on their own in this world-container, and remain there independently of our vocabulary. That idea of' 'source' is, after all, the fundamental connotation of the word 'nature', and the word successfully denotes a spontaneously generated world that we encounter, producing a conviction that it precedes and surrounds us.

ENVIRONMENT

Coming more local, or earthy, as we have just done, limiting the scope of our claims about 'nature', perhaps we need to shift to a less grand word, and such a word is ready at hand in 'environment'. 'Environment' is not nature, for nature is all there is anywhere anything is. An 'environment' must surround someone; in that sense 'environment' is quite similar to 'ecology', the logic of a home. Various organisms have their various homes, and at least we humans can know the logic of these homes, both ours and that of others around us. Only solipsists doubt that humans have environments both social and also natural. Humanist pragmatists realise that they live in such environments.

Yes, and now the pragmatists are quick to claim that 'environment' is obviously a relational word. Somebody, some organism has .got to be in dialectical relationship with it or it isn't an environment. Maybe we can get beyond the word in our language, but not beyond relation to our environment. For humans, Berleant puts is this way: 'Environment arises out of the reciprocal interchange between my self as the source and generator of perception and the physical and social conditions of my sensation and actions . . . For environments are not physical places but perceptual ones that we collaborate in making, and it is perceptually that we determine their identity and extent.'[19] The environment is as much of nature as gets caught in one's perspective, as comes within one's horizon. 'Environment is no region separate from us. It is not only the very condition of our being but a continuous part of that being.'[20] He continues: 'This is what environment *mean:* a fusion of organic awareness, of meanings both conscious and unaware, of geographical location, of physical presence, personal time, pervasive movement... There are no surroundings separate from my presence in that place.'[21]

We need to clear up some confusion in this 'fusion' by the use of modifiers. *My* environment is my inhabited landscape, where I work and reside; *our* human landscape is where we have placed our culture. Landscapes are more public and stable than horizons; we coinhabit them with neighbours. So *my* environment, though it is a perspective that is true in shortest scope, is rather too private a term. My environment when encountered as a landscape is a commons shared, your environment too, *our* environment. That fosters social solidarity, fortunately. It also demands another, fuller sense in which *the* environment is objectively out there, and this is not only our social world, but the natural world that we move through, there before we arrive, and there after we are gone. We can put a definite article before the word. We have our environments, plural, because there is a world out there, *the* environment, in which all these horizons are sustained. Environment is not my creation; it is the creation. I do not constitute it; it has constituted me; and now it seems arrogant and myopic to speak of foreground and background, of what I frame on *my* horizons. Environment is *the* ground of my being, and we can remove the 'my' because 'the' environment is the common ground of all being.

David Cooper demurs. The problem with environmentalists is that

> their notion of environment is of something much too big . . . Let us take our lead from those terms – 'milieu', 'ambience', 'neighbourhood' even – which, until recently at least, were close relatives of' 'environment'. Those terms denote what a creature knows its way about. . . An environment as milieu is not something a creature is merely *in,* it is something it *has* . . . An environment, that is, is something *for* a creature, a field of meanings and significance.[22]

That seems solidly relational; but, on pain of solipsism again, these creatures come in the plural, other humans in their environments, but also non-human others in their environments.

As we find ourselves in this webwork of environments the definite article points to this common environment shared by us all, including non-humans, or we can even

say the whole: 'The Environment'. Perhaps there is no such singular thing as 'the environment' out there – as with the word 'nature', we are again inventing a category into which we can put things. We invent, however, because, as we move through our environment, we find others in their environments. There are ecosystemic causes and effects, relating these others in biological and geomorphological nature; the whole milieu is a shared commons we tag 'the environment'. This notion can perhaps get too big; still, it does need to be big enough to include non-human neighbours and their relations. We are 'in' this environment, though what an organism 'has' is the niche it occupies in this larger environment; and humans, unlike the other creatures, can take some overview of this larger Environment.

Rorty deplores 'the impossible attempt to step outside our skins – the traditions, linguistic and other, within which we do our thinking and self-criticism – and compare ourselves with something absolute.' He urges philosophers to suppress the 'urge to escape from the finitude of one's time and place.'[23] Yes and no; no creature can get outside its skin, that is a biological impossibility. Analogously for humans to escape language is a linguistic impossibility. But the central idea of ecology is that skins are semipermeable membranes. Life is a skin-out affair as much as a skin-in affair. Life is impossible without transactions across skins, mediated for the fauna by their senses, by limbs with which they step around in the world, by mouths with which they take in the world. Ecology is all about the interactions of real organisms located in their real worlds.

For humans, such ecological exchanges are facilitated by our traditions, our language; we are not so much prisoners inside our skins as persons incarnate in the world. We do not want to escape the finitude of time and place, rather to establish the reality of time and place, and then to evaluate life in its historical, earthy finitude. We perhaps cannot compare our percepts and concepts with something absolute, but we can compare them with a world on the other side of our skins, which we move through, forming a self-image co-responding with this world image.

Any speaker's field of immediate significance is, of course, 'me and my ecology', yet, if there are listeners, that soon enough means 'us and our ecology'. Rorty wants that much solidarity with the significances that surround other persons; that makes ethics possible. The solidarity, or community, that environmental ethics requires finds significances in others in their ecologies too. We discover the webwork of connections as objective fact, outside our language, an 'environment' that we need for environmental ethics. How can we care for others if we cannot see outside our skins enough to know both that they exist in their different modes of being and that they have their own fields of significances? We will do this, of course, from within our skins and languages, and these things will come to have significance *for us.* Still, the environment, the biotic community, cannot be reduced to *our* field of significance, any more than can the cultural community be reduced to *my* field of significance.

Wendell Berry continues these doubts about 'environment', again fearing a kind of dualism that might let us separate our human selves from these surroundings external to us.

> The concept of country, homeland, dwelling place, becomes simplified as 'the environment' – that is, what surrounds us. Once we see our place, our part of the world, as *surrounding* us, we have already made a profound division between it and ourselves. We have given up the understanding – dropped it out of our language and so out of our thought – that we and our country create one another, depend on one another, are literally part of one another. . . Our culture and our place are images of each other and inseparable from each other.[24]

Berry is a combination English teacher and farmer, and that leads him to combine what language does to the world with what farmers do to the world. True, Kentucky farmers and their countryside 'create' (shape) each other, and they need a language that incorporates them sustainably into their rural world. Every culture interacts with the natural place in which it is situated. Meanwhile there is also 'the' world that does surround us, that we did not create, and we do not want this world to drop out of our language, but to use 'the environment' as a word enabling us successfully to refer to it. We may even wish to separate out parts of that environment, in Kentucky and elsewhere, to conserve it free of our culture.

WILDERNESS

'Wilderness' is not so cosmic a word as 'nature' but it does suggest that we put the significant prefix 'wild' before nature; and nature with this modifier, 'wild nature', should make it abundantly clear that we are using words to refer to a world outside the human sector, in this case to nature unmodified by humans. The reference, it would seem, is not just to us and our environment, and that will avoid the confusion we had with the word 'environment'. Not so, say the grammarians; notice that 'wilderness' is a modern word we have made up. Non-Western peoples typically do not have the word in their vocabulary, and even some Western languages (like Spanish) do not have such a word. In English, the word has multiple meanings, shifting over the centuries. Wilderness was once untamed, uncivil nature, nature cursed after the fall of Adam, savage nature beyond the 'frontier' which it was the American/European manifest destiny to conquer. Only with the Romantic movement, and still more recently with the modern wilderness movement, did the current concept of wilderness arise, a pristine realm unspoiled by humans.

Such a state is not something humans have ever really known; 'wilderness' so imagined is a foil for their culture, a romanticised Garden of Eden. The word gets made up when there is very little of wild nature left, as in Europe, when explorers leave for exotic places, or in the United States, when the frontier is closed, and wild places are threatened by the success of civilisation. Thereby hangs much of its fascination, for wilderness enthusiasts have a kind of archetypal longing for, or archaic vision of, a world with no people in it. David Lowenthal says, 'The wilderness is not, in fact, a type of landscape at all, but a congeries of feelings about man and nature of varying import to different epochs, cultures, and individuals.'[25]

David Graber explains:

> Wilderness has taken on connotations, and mythology, that specifically reflect latter-twentieth-century values of a distinctive Anglo-American bent It now functions to provide solitude and counterpoint to technological society in a landscape that is *managed to* reveal as few traces of the passage of other humans as possible ... This wilderness is a social construct.[26]

'Wilderness' is a myth of the urbane, mostly urban mind. Wilderness is another one of those filter-words with which we colour the nature we see. The truth is, say the reconstructionists, that we, being people, cannot know any such people-less world; that is only pretence.

Seemingly at the risk of doublespeak, but in fact clarifying our language, we have to say that in the wilderness there is no wilderness, just as there is no date or time of day. 'Wilderness' is a region that the US Congress (or other national statutory authority) has 'designated' as such, placed boundaries around and made laws about. By intersubjective agreement, we define it in relation to ourselves; it is 'untrammelled by man', no people live there; it is a place where we modems, with so much technological power, resolve to restrain ourselves. We have mapped it, managed it, studied it. All this defining and resolving 'constitutes' a wilderness-lens through which we modern Westerners see nature; 'wild' is as much construct as 'West', and postmoderns see this.

The trouble is that the postmoderns see so much language-lens that they can no longer see nature. It cannot count against 'wilderness' having a successful reference that some earlier peoples did not have the word. Yes, 'wilderness' is, in one sense, a twentieth-century construct, as also is 'the Krebs cycle' and 'DNA' and the 'Permian/Cretaceous extinction'; none of these terms were in prescientific vocabularies. Nevertheless, these constructs of the mind enable us to detect what is not in the human mind. We must not confuse what we see with how we see it, even though how we see does shape what we can see. There are no doubt many things going on in the wilderness that we yet fail to see, because we do not have the constructs with which to see them. That does not mean, however, that there is no wilderness there, nor that these things are not going on.

Civilisation creates wilderness? Lately yes, originally no. Civilisation designates wilderness; more specifically, the US Congress acting for its citizens designates wilderness, and other legislative bodies can and ought do so as well. That is a legislative meaning of 'create', not the biological meaning. Wilderness created itself, long before civilisation; everybody knows that, Nash included, and it is only setting up conundrums to exclaim, 'Civilisation created wilderness.' Historians of ideas are permitted such language; analytic philosophers and natural historians must disentangle what they mean. It ought not be that difficult for Lowenthal, a geographer, to distinguish between the wilderness idea, which has its vicissitudes in human minds, and wilderness out there, wild nature in the absence of humans - unless one really has been hypnotised by the erudite withdrawal into a windowless web of words, symbols without referents. A 'congeries of feelings of varying import to various individuals in various epochs' is not

wilderness worth saving. With more denotation with the connotations, there is plenty of surviving objective reference in the word, outside not only the twentieth century, but also all civilisation. Reference can remain constant through changes in meaning, as has happened with 'water', or 'gold', and 'wilderness'.[27]

Pre-Darwinian peoples had an immediacy of encounter with nature that scientists today may lack, and among them there are forgotten truths. They too had places in nature that they only visited, not to remain. But they had only groping access to the depths of historical time and change that have characterised Earth over the millennia. They had neither evolution nor ecology as sciences on the one hand (nor microbiology nor astronomy), and their cultural developments, on the other hand, did not (not so evidently to them, at least) threaten the health and integrity of their ecosystems. Even we Westerners have re-educated ourselves in this century about these matters. We have increased access to non-human phases of nature; we increasingly threaten such nature.

This is why we have constituted the word 'wilderness' as a filter with which the better to see these foundational forces, not earlier so well known, and to care appropriately for them, resolving in our high-tech cultures that there will always be places where humans only visit and do not remain. Wilderness is, if you like, a new 'idea(l)' ('myth') we have recently set up, but we did so because we discovered wilderness for 'real'. We want to conserve this realm for what it is in itself, naturally there; we also want it because it can help us dispel these myths of humans imprisoned in their own ideas, giving us new idea(l)s that make humanism too still more real. The rescue attempt is recent; the reality is primordial.

No, comes the reply, such rescue of ideal wilderness is a bad myth because we use it to suppose a pristine nature separate from humans, when the better view is a world with which humans are always in some interactive encounter. Listen to David Rothenberg:

> It is the idea of nature independent of humanity which is fading, which needs to be replaced by a nature that includes us, which we can only understand to the extent that we can find a home in the enveloping flow of forces which is only ever partially in our control. . . There is no such thing as a pure, wild nature, empty of human conception. . . . Wilderness is a consequence only of a civilization that sees itself as detached from nature . . . This a romantic, exclusive and only-human concept of a nature pure and untrammeled by human presence. It is *this* idea of nature which is reaching the end of its useful life.[28]

Wade Sikorski continues:

> The wilderness is not the opposite of civilization, as it has long been characterized in the Western tradition, virginal, unhandled, inhuman, untouched, but rather a building that we dwell in . . . In going into the wilderness, which is as easily found in the city as in the vast rain forest, we are going home because wilderness is the place where we recover the things that are most ourselves, but that we have denied, repressed, forgotten. Building wilderness is a lot like

> interpreting dreams. In doing it, we encounter. . . . an otherness that is not really so other because it is our own Being.[29]

Well, if that is true, if wilderness is as readily had in New York City as in the Bob Marshall Wilderness in Montana, if – something like interpreting dreams – we are only plumbing depths of our own subconscious to find our earthy connections, then the US Congress has wasted a lot of time, with its wilderness designations, finding and protecting the untrammelled places where there are no human beings. We can timber the wilderness, because wilderness can be built by clever people going home to find their earthy selves. But surely that is a travesty on what wilderness objectively is; wilderness is not built by our states of mind, despite Sikorski's poetic licence. The literati can play with words as they please; analytic philosophers say, more carefully, that we need to build 'wilderness' sensitivity in the human mind because wilderness is discovered as what is there before us and without us.

Henry David Thoreau seems almost to agree with Sikorski:

> It is vain to dream of a wildness distant from ourselves. There is none such. It is the bog in our brains and bowels, the primitive vigor of Nature in us, that inspires that dream. I shall never find in the wilds of Labrador any greater wildness than in some recess in Concord, *i.e.* than I import into it.[30]

But restore that passage to its context: Thoreau had gone cranberrying nearby in an infrequented bog and he discovered, unexpectedly, a small, northern cranberry, *Vaccinium Oxycoccos*, which was known previously no closer than Labrador. He delights that this bit of wildness remains in the nooks and crannies of the Concord landscape. 'I see that there are some square rods within twenty miles of Boston just as wild and primitive and unfrequented as a square rod in Labrador, as unaltered by man.'[31] That does not deny objective wildness; it affirms it.

Finding this wildness unexpectedly near brings Thoreau to the further thought, expressed rather exuberantly, that there is wildness nearer still, even wildness within us, a primitive vigour of nature in our bowels. Nature lies in, with and under culture. He himself, returning to the bog, imports that inner wildness carried along in his body. We also wish to discover our continuing rootedness in wild nature; spontaneous nature is still there in our brains and bowels, our biochemistries and our evolutionary legacy. But none of this means that we 'build wilderness' in Sikorski's phrase.

When we know anything, we are there; wilderness unexperienced by humans is wilderness unknown by humans. But these subjective experiences are *of* nature objective to us (as well as of nature in our bowels); and if we lose that conviction, and see wilderness as nothing but modern myth, we can forget wilderness preservation. Contrary to Nash, wilderness is not a state of mind; it is what existed before there were states of mind. We may not have noumenal access to absolutes; we do have access to some remarkable phenomena that have taken place and continue to take place outside our minds, outside our cultures. Some of such nature ought to continue to exist, wild ecosystems, over and beyond whatever of nature (what 'wildness') we humans embody within ourselves or need for ourselves.

SCIENCE

'Environment' plunges us into surroundings in which we reside; 'wilderness' dreams of a world that humans only visit; both are emotively charged words. The word we need is 'science'. Natural science can take a disinterested approach. Alas, however, not even science is beyond these epistemic doubts.

Don Cupitt puts this quite bluntly:

> Science is at no point privileged. It is itself just another cultural activity. Interpretation reaches all the way down, and we have no 'pure' and extra-historical access to Nature. We have no basis for distinguishing between Nature itself and our own changing historically-produced representations of nature ... Nature is a cultural product.[32]

David Pepper, urging a postmodern science, insists:

> Above all, a historical and ideological perspective teaches us that there is no one, objective, monolithic truth about society-nature/environment relationships, as some [scientists] might have us believe. There are different truths for different groups of people and with different ideologies . . . Each myth functions as a cultural filter, so that adherents are predisposed to learn different things about the environment and to construct different knowledges about it.[33]

Pepper could be right if he only means that different societies will put their knowledges of nature to different uses, but he wants also to argue, with Cupitt, that there is nothing privileged about Western science; it is only another 'cultural filter'. Cupitt is right that there is no '"pure" and extra-historical access to nature'; but does it follow that nothing in our 'changing historically-produced representations of nature* represents what is actually there in 'Nature itself'?

Yes, so the humanists claim, joined by some philosophers of science. Look right at the fundamental claim of science. The alleged disinterested objectivity is a myth. Nature-as-mere-object-for-science is a distorting lens that views nature badly, although it does give us a knowledge capable of manipulating nature. The alleged disinterest is a veil for Western, rationalistic, world-conquering, analysing, technological interest, a secular power position. C. S. Lewis claims, 'We reduce things to mere Nature *in order that* we may "conquer" them ... "Nature" is the name for what we have, to some extent, conquered.'[34]

Yes, but many scientists take considerable interest in describing natural history, not nature-as-conquerable-thing but nature-as-actually-there, encountered and independent of the human presence. Our interest is whether environmental science can describe objects in nature *in order that* we may conserve them. Is that only another myth, which happens to be our currently fashionable cultural filter?

'Science describes a world already there!' No, says Rorty, 'we must resist the temptation to think that the redescriptions of reality offered by contemporary physical or biological science are somehow closer to "the things themselves" . . .'[35] We do not

encounter, for instance, ready-made lions out there in natural history. True, those who did not take 'lion' to refer to a predator lurking in the bush are extinct Still, surviving people do not have any naked percepts of lions; people believe in lions in diverse, culturally constructed ways, through the traditions of their rearing. Science is one more such schooling. Everyone 'sees' lions; a zoologist will 'see that' lion behaviour is 'territorial defence', and some particular lioness is the 'dominant matriarch' in the pride. Richard Dawkins sees that lions are full of 'selfish genes', a powerful symbol of nature as a whole. 'I think "nature red in tooth and claw" sums up our modern understanding of natural selection admirably.' Winning organisms are always 'like successful Chicago gangsters.'[36]

That could be more of the conquest mentality. Paul Keddy, finishing the leading book on *Competition*, notices that mutualism is rarely mentioned in ecology textbooks, while competition and predation are everywhere featured. He puzzles over this, since mutualism is everywhere in nature; the explanation, he finds, is 'that scientists are heavily influenced by their culture (consciously and subconsciously) when they ... select models to describe nature ... With respect to research in ecology, we may be projecting our own cultural biases upon nature rather than studying forces in relative proportion to their importance in nature itself.'[37]

A decade hence the theories could be different, emphasizing perhaps the pride's cooperation, the harmonious balances between predator and prey, or the comparative unimportance of predators, or population control by parasites, or how the fate of the lions, at the top of the food chains, is more an accident of rainfall and grass for wildebeest to eat than of successful selfish genes or red teeth and claws. A scientific account today is as culturally constructed, 'like Chicago gangsters', as was seeing the lion as 'the king of beasts' yesterday, taken as the lordly power symbol of the British empire or as the totem of some African tribe. Science is really transitory because it is framed by passing scientific fashions.

Rorty concludes:

> 'We may have no more than conformity to the norms of the day. . . . this century's "superstition" was last century's triumph of reason . . . the latest vocabulary, borrowed from the latest scientific achievement, may not express privileged representations of essences, but be just another of the potential infinity of vocabularies in which the world can be described.'[38]

Science only provides makeshift sketches that we will replace, after more explorations, with a new round of cartoons. Today's science is just another passing metaphor.

This is bothersome. Without entering the larger debate about realism in science, we do need to settle whether science describes fauna, flora and states of affairs at the ranges where environmentalists are concerned about saving nature. In earth science and ecology, much of what is observed is on this side of Bas van Fraassen's observability divide: those lions, for example.[39] We *see* and we *see that* there are natural kinds to which our words refer. The Kalam of New Guinea recognise 174 kinds of vertebrates; all except four correspond to species, genera, and subspecies recognised by Western

systematists today, and such parallels are often true with aboriginal peoples.[40] That suggests considerable objective reference in taxonomical science.

Scientists can go further than such peoples, who have a limited range of experience and no microscopes, in the naming of invertebrates – ants, for instance – or in comparisons with plants around the world, using a herbarium to place a plant in its family. Given an unknown plant, a good botanist can take out floras, which are full of words and a few sketches, and key it out to one species among the 300,000 named species of plants. Another botanist using those books will get the same result (without denying that there are judgement calls and borderline disputes). Maybe the correspondence theory of truth is not philosophically respectable, but it seems as if these botanists have put down in words some descriptions of what is objectively there in the world.

One cannot, however, by direct observation locate a species in its phylogenetic lineage. The hyrax *(Procavia),* a primitive African and Middle Eastern ungulate, though small and resembling a rabbit, and even once placed by systematists with the rodents or lagomorphs, is now considered to be more nearly related to the elephant or rhinoceros, the largest of animals. This discovery is the result of fossil and anatomical evidence, the finding that there were much larger hyraxes in the paleontological past, also the finding that dentition, morphology such as the structure of the feet, and physiology relates them to primitive ungulates.[41] Such science certainly seems to be describing what is the case in phylogenetic lineages.

The truth in such a claim is not to be dismissed by noting that systematists 'came up with' this classification in the twentieth century; and used eyes to see the fossils and the anatomy, and brains to interpret what the evidence meant. Reason does offer, contra Rorty, 'a transcultural human ability to correspond to reality.'[42] Maybe what we should resist is not the temptation to think that evolutionary and anatomical science have indeed brought us closer to the hyraxes themselves, but rather this claim from the academic left that it has finally got it right and that nobody is objectively right about anything. To be sure, claims about hyraxes are not metaphysical claims, not ultimate claims, not, in that sense, transcendent. But they are claims that humans know something about surrounding phenomena, transcending culture, claims about events past and present that are true because they describe the phenomena as these exist in themselves.

There are plenty of features of mid-scale Earth to which our human senses are not attuned – cold fronts, El Nino currents, ultrasonic insect calls, low-frequency elephant communication, or phenotypes coded in genotypes, or natural selection. Biological theory and practice can alert us to these events. Often, the problem of scale becomes that of time, which makes much invisible to our myopic eyes. We cannot see mountains move, or the hydrological cycle, or species evolve, though sometimes one scale zooms into another. Water flows, mountains quake, rarely; and we can see incremental differences between parents and offspring. We can see occasions of mutualism and of competition, though we have to estimate their force. We can examine the fossil record and conclude that there was the Permian Period and a catastrophic extinction at the end of it.

Often the problem of scale is that of size, and cellular biology and biochemistry have revealed microscopic nature. The sporophyte generation of mosses is haploid. Malaria is carried by *Plasmodium* in mosquitoes. Neither of those facts is likely to change with a new cultural filter. Golgi apparatus and mitochondria are here to stay. There is no feasible theory by which life on Earth is not carbon-based and energised by photosynthesis, nor by which water is not composed of hydrogen and oxygen, whose properties depend on its being a polar molecule. Glycolysis and the Krebs cycle, APT and ADP, will be taught in biology textbooks centuries hence, as well as lipid bilayers and immunoglobulin molecules. Oxygen will be carried by haemoglobin. Although no one can 'see' any of these things, and although biologists constructed these ideas using lots of theories and instruments, they are right that CO_2 is released in oxidative phosphorylation and that this cycles through photosynthesis II and photosynthesis I, so that in the world there is a symbiotic relationship between plants and animals and that this is a vital ecosystemic interdependence.

There is no unmediated nature; therefore we know nothing of nature as it is in itself? But this assumes that media cannot, reliably, descriptively, transmit truths about what is there. Biologists do abstract, and this can result in falling to see what is left out of the abstractions. They invent the theories with which they see, and these may blind them to other things. But inventions can also help us see. Science can regularly check its constructs against causal sequences in nature. Does not Keddy move to correct the prevailing bias toward competition, because he is constrained by what is encountered, rather than just introduce a new fashion? Better theories will come as a result.

These are only relative, local truths, a critic will protest. Yes, but they are settled, final truths locally. Or, for the purist who insists that we know nothing empirically with apodictic certainty, they are far more certain than are beliefs about the cultural relativism of science. Even if some of these claims should be revised, as they will be, the general cluster of discoveries is not going to fail. True, the mirroring of nature is only partial; we see through a glass darkly. One doesn't have to know it all to know something. These claims are modest, specific, earthbound, even, if one insists, fragmented. They only catch up a part of a scene in which much else is going on of which we are as yet unaware. They are mixed with error. They are not arrogant, universal (true in all worlds), total, grand, absolute. But they are still significantly true in that they describe what is going on here on Earth, objectively and specifically in Earthbound organisms and ecosystems.

But all this is so naive! – the sophisticated will now claim. Though our epistemological prison may not have mind or skin as walls, we cannot escape the local world. Neither scientists nor anybody else has any access to unconceptualized reality to check such intellectual representations against the way nature is built; we can only get at the world through concepts and these models are human-built. Hilary Putnam insists, 'There is a real world *but* we can only describe it in terms of our own conceptual schemes.'[43] Everything has been 'conceptually contaminated'[44] when we see it. He continues, '"Objects" do not exist independently of conceptual schemes. *We* cut up the world into objects when we introduce one or another scheme of description.'[45]

Lions? Yes, because kinds of objects do not exist until we construct them conceptually, such as the lion-kind. 'We must observe that "of the same kind" makes no sense apart from a categorial system which says what properties do and what properties do not count as similarities. In *some* ways, after all, anything is "of the same kind" as anything else.'[46] Consider the species *Panthera leo* (lion). Confronting a lion, what's out there is in fact "of the same kind" as the species *Panthera tigris* (tiger) - if one is choosing the category of genus, or of mammal, or vertebrate, or heterotroph, or four-legged critter. Or of quarks, since all lions and tigers are all of these things. Confronting a lion some systematists see the same thing (genus) as many other cats, and put *Panthera* in the genus *Felis*, the question is what weight one gives to the hyoid bones, developed from the second visceral arch and which support the tongue. So there are judgements of our choice that decide whether things are of the same kind

But why not say, more precisely, that we can choose various sets – buckets in which to collect things – but that some of these sets are registering natural forms? Our construction of some sets is constrained by what has been constructed by nature. There are, sometimes, judgements of our choice about which labels to use for these different natural kinds of things (different cats) that we find. Sort our labels as we may, the question is not, fundamentally, our categories of choice, but whether we confront, at the native range level, a natural kind in lions, one that all peoples of all cultures must recognise because this kind is found ready-made in nature.

Surely we do hot think that lion-objects come into being when we humans arrive and cut up the world into such objects. Lion-objects are instances of organismic individuals; each individual exists instantiating a natural lion-kind, a historical lineage of ancestral-descendant populations propagated dynamically over generations for millions of years on the plains of the Serengeti. This lineage, could it be traced further back, would find ancestors whose lines branched into the various vertebrates and mammals, with subbranches of this speciating being the cats. Lions being 'of the same kind' makes sense because, apart from any human categorial system, lions – members of the lion species – reproduce themselves over again and again, their genetically encoded information determining what properties count as the similarities needed to make another lion. Humans, in their categorial systems, get lions right when they describe such objects and events. Humans cannot cut up the world any way they please; they have to 'carve nature at the joints.'[47]

We cut up the world into objects? Is there then only some undifferentiated flux before we cut? No, Putnam backs off a bit, we should not describe the view of the anti-realist as one 'in which the mind *makes up* the world . . . If one must use metaphorical language, then let the metaphor be this: the mind and the world jointly make up the mind and the world.'[48] But now what is getting contaminated conceptually is *epistemological* making up the world with *ontological* making up the world, the order of knowing with the order of being. True, we humans make up our categories as we know the world; that is epistemology. But it is also true that the world made up these natural kinds once upon a time; that is ontology. These are two very different makings-up, and it only confuses them to telescope them into a joint metaphor.

The problem with the joint making-up aphorism is that the Earth-world was quite made up with objects in it long before we humans arrived with our minds; the Earth-world made our minds over several billion years of evolutionary history, as it also made up our hands and our feet. True, our minds are unfinished, and we make up our metaphors in this construction, but joint make-up is another half truth, which becomes false in the whole. Our mind, with our words, is made to reach for objects as much as our hands, with our fingers. What the realist wishes to claim is that human-made epistemology can, and often does, track world-made lions in their African savanna ecosystems. Ontologically, we should begin with an account of the world out there, and, at or near the end of this account, move inside to the mind 'in here' and how it knows what is out there. Epistemologically, we do have to start within and move out. We may find sometimes that objects in the world are conceptually illuminated as much as conceptually contaminated by our linguistic conceptions.

Still, replies Putnam, we can have only a limited objectivity, realism with a human face:

> Our conceptions of coherence and acceptability are … deeply interwoven with our psychology. They depend on our biology and our culture; they are by no means 'value free'. But they *are* our conceptions, and they are conceptions of something real. They define a kind of objectivity, *objectivity for us*, even if it is not the metaphysical objectivity of the God's Eye view. Objectivity and rationality humanly speaking are what we have; they are better than nothing.[49]

Are the lions then only objective *for us*, and not for the Thomson's gazelles, who have a different psychology, biology, and no culture at all? Are the lions differently objective for gazelles because gazelles have evolved with defences against lions, keen eyes and quick limbs? The smell of a lion probably figures large for a gazelle. But does that mean lions are not objects for us both? Or that we cannot know the relations between gazelles and their lion-objects? Are the hyraxes related to the elephants and rhinoceros *only for us?* If intelligence had appeared in some other phylogenetic line (the elephants or gorillas perhaps), might something else be true for them? God might have still a third opinion?

But – the critic continues – we must know whatever we know in some humanised way. 'We can't get out of our skin to reach what's really there. We can't get out of our culture for culture-free comparisons. It is impossible to get beyond the sense experience of consciousness; all we can do is analyze events, their regularities and particularities, within the sensorium of conscious experience.' It may seem as though this is obviously true, something like we can't think somebody else's thoughts or feel their pain. But realists ought not to accept such arguments too easily. On a more ecological view humans do not have to get out of their skins to reach what's really there; there are windows out and in – they are called eyes, ears, noses, hands. Life is a matter of transactions across semipermeable membranes.

The can't-get-out-of-our-skins argument seems so persuasive. It is trivially true, and this gives it its rhetorical appeal. For those who take an ecological view, however, the skin-out world is as vital as the skin-in world. Those who live within the skin, without

ecological exchange, are soon dead. Perception is not unintelligible as contact with something out there; perception is only intelligible if it is contact with objects and events out there. Likewise with the conceptions that humans in their cultures use to describe, in human language, a web of experience that is continually contacting what is out there, presenting, representing it. All study of nature takes place from within some culture or other; but it does not follow that scientific study is not constrained by the objects it studies external to culture.

Now the objection takes another form. These are only truths about the phenomena. True, but the objection is curious. From the perspective of deep metaphysics (the energy pit below the quarks, or behind the Big Bang, the mystic's *maya*, the Kantian noumena, this may be only the surface of things. But biological claims do not try to get underneath to some noumenal realm; biology claims that these phenomena are given in themselves. Photosynthesis is going on whether or not humans are experiencing it or capturing photosynthetic energy for some human utility. If other investigators, unlike ourselves, were to visit Earth from space, they would find out these same things, although, of course, they would have a different vocabulary for tagging these events, and even though they might be colour-blind and not see trees as green. They would have parallel experiences, because this is the way the world is.

EARTH

Philosophers are fond of talking about 'the world', about world-view and the way we humans see or cut up the world. Environmentalists incline to think of an Earth-world. Maybe there is no mirror of nature, but there are photographs of Earth. These are artifacts of a technological culture, and only of the surfaces of Earth. Still, we see Earth, the big environment. Nowadays, everyone in any culture, if reasonably well educated, is convinced that there is a planet Earth, this 'world' which preceded and continues to support all cultures, including the technological ones. 'Earth' certainly seems to have objective reference, a proper name for a particular planet. Contrary to Rorty's 'world well lost', environmentalists want a world well saved, and he likely agrees that we ought to save the Earth.

There is an Earth, reply die constructivists, but still these Earth-pictures become texts; they help people reconstruct nature again: now not so much as selfish genes, or nature red in tooth and claw, or *maya* or *samsara,* but as the global village, the small, fragile planet. The round planet merely observed has no content, no overview of nature comes ready made with it. The photograph of this Earth-world goes into a larger world-view; it becomes an icon. The photograph, which in itself doesn't say anything, becomes an argument for a way of viewing Earth. Look at the photographers and the social forces that put them into space. Here are men 'with the right stuff', the right know-how and expertise, all the technology making the picture possible. Look at how the global images are used in the media, how differently when put on the covers *of Science* or *Scientific American* (a planet to be managed with GIS systems), or on *The Whole Earth Review* (the biospheric whole) or as Buckminster Fuller's Spaceship Earth, or on the dustjacket of James Lovelock's *Gaia.* Environmentalists

see an ecumenical Earth, the habitable Earth, longed for in contemporary, Western social vision.

The astronauts were earthstruck. Viewing Earthrise from the moon, Edgar Mitchell was entranced, 'Suddenly from behind the rim of the moon, in long slow-motion moments of immense majesty, there emerges a sparkling blue and white jewel, a light, delicate sky-blue sphere laced with slowly swirling veils of white, rising gradually like a small pearl in a thick sea of black mystery. It takes more than a moment to folly realize this is Earth ... home.'[50] That is quite a text accompanying the picture, a world-view attached to this view of the world. The home planet! That is not some noumenal, essentialist nature in the absence of humans. Maybe the cosmos surrounding Earth is a deep black void, but Earth is an actual reality. Is there not an overwhelming sort of objectivity in, with and under the astronaut's subjective feelings?

The camera does have an object in focus. There Earth is, out there in space, an object to which these varied interpretations make reference. And the confrontations demand response. Here is a notable mixture of humans standing apart, overseeing, and being grasped by their encounter. This is seeing the whole, yet not with detachment and uncaring, rather with attachment and caring. Humans make objective reference outside themselves to the biosphere in which they live and move and have their being. Fred Hoyle wrote, 'Once a photograph of the Earth taken from *the outside* is available … a new idea as powerful as any in history will be let loose.'[51] Here is an outside view that convinces us how much we are insiders, Earth seen from above, the views convincing the viewers how much they are earthlings, though not the only earthlings. The distance lends enchantment, a new image of nature - so the myth-makers will say.

Yes, but is not this a special-kind of new image, one that brings us home again? The distance helps us to get real. We get put in our place. Metaphysically and epistemologically we are cautioned: 'There is no big picture.' All that anyone can do is tell his or her local story. Avoid totalising discourses. There is no 'grand narrative', not even in science; the definition of' 'postmodern' is 'incredulity toward metanarratives'.[52] There is no philosophy-in-the-round, no nature-in-the-whole. Well, maybe, if one is speaking cosmologically or metaphysically. Meanwhile, there is this Earth-in-the round, Earth-as-a whole, and that is big picture enough, a rather grand narrative – even before we humans, much less modern or postmodern humans, arrived. If anyone were to try to tell his or her local story forgetful of the larger story taking place on this Earth location, that would be too individualistic, too isolationist, for the human and the Earth stories have entwined destinies. We cannot know who we are without knowing where we are.

'Man only deceives himself when he regards his own linguistic constructs as embodying some trans-anthropological truth. Escape to a purer, strictly representational language is not even possible; at most one can revel in the fact that man, like the spider, spins out of himself the world which he inhabits.'[53] But this is only partially true, whether of spiders or of humans, and if taken for the whole it becomes false. Spiders spin their webs, located in a larger ecology. The linguist slips from: We can

never speak of the world without human concepts and percepts, to: We can never speak of the world without speaking of ourselves, to: We can never speak of the world, only of ourselves. We cannot escape virtual reality.

Though spiders make a web in the nearby few inches they inhabit, they live in an enormously larger world, of which they are enormously unaware. Humans build their cultural worlds and live in those webs. Spiders may take an arachnocentric, humans an anthropocentric view. But even spider webs catch objects from the outside world. We humans know how much the world exceeds the cultural webs we have made up, not despite how linguistically entrapping these webs are, but because of their linguistic power enabling focus, reference and analysis. Language wraps around many things that our senses bump into, these 'objects' on which we were before insisting, and now this 'Earth-world' on which we find ourselves. We construct, and continually reconstruct, our language to make sense of what constrains our senses. We have not just spun some babel of words; we have successfully coped because words copy enough of a world that lies on the other side of language for us to survive and flourish. Webs, like other constructed nets, catch what they do not create. Continuing the metaphor, epistemologists who fail to get their world in some objective focus are too much like spiders; they threaten to capture us in a web of words from which we are powerless to escape. Disabled so, we fail to understand the world that has spun out both spiders and humans.

At this point, perhaps the planetary photographs can trigger a privileged symbol. You do think Earth is real, do you not? Is it only or simply some web we have spun? The word 'Earth' successfully refers, no matter that there are differences in the accompanying texts, and the photographs could be successfully taken, because humans now know a round planet, orbiting the sun; we know something of its circulations, evolutionary origins, ecosystemic connections, fauna and flora. There is no more flat Earth, no turtle island cosmology, no more Earth created in 4004 BC with a garden planted in Eden in the Middle East, no Izanagi and Izanami stirring up the Japanese islands, or Amaterasu bringing order to them. There is no more enchanted world, populated with fairies and demons, though perhaps there remains, as much as ever, a sacred or numinous world, as the astronauts often discovered in their interactions with the whole. Any truth in these pre-scientific views, other cultural filters, will have to be demythologised, and if one insists that this is remythologising, then know that the right world-views, the 'true myths', must be trans-scientific, trans-humanist, transcultural, that is, science, humans and culture must take reference points outside themselves in these planetary events.

The planetary view eliminates boundaries between nations and cultures; this is 'the home planet'. It also eliminates boundaries between humans and nature, but as much by containing humans within an objective nature as by constituting nature within human cultural intersubjectivities. Earth is the commonwealth of living beings sustained and generated by Earth. In their knowledge about Earth, people on the planet have reached a certain threshold of maturity in synoptic, extra-cultural knowledge from which there is no turning back. We have become overseers, over-seers. This objective truth is not naked truth. It lays commands on us, just because it is for real. We have

enough truth to be 'true to' an understanding and a vision of values in nature and an environmental ethic.

VALUE

In these ultra-sophisticated circles, if describing nature is an illusion, prescribing duties toward nature is illusion on illusion, nonsense on stilts. Humans are unable to discover natural forms, and, *a fortiori*, natural norms. We ought not pretend to value nature outside our cultural frameworks. Do not try, warns Eugene Hargrove, to develop a non-humanist argument that 'such values exist independently in nature . . . The best way … to deal with this concern is actively to defend these values as part of our cultural heritage, not to try to develop a metaphysical/epistemological theory of objective nonanthropocentric intrinsic values that constitutively trumps individual judgment and culturally evolved values.'[54] We concede that this might be a better tactic for pressing wilderness legislation on the floor of Congress, or for political ecologists writing a green party platform, but what about this retreat philosophically?

The retreat is wise, it is insisted, because knowing non-anthropogenic intrinsic value requires humans to do what they cannot, get out of their skins, languages, minds, and to value nature independently of human perceptions and preferences. Hargrove continues: 'The search for a nonanthropocentric intrinsic value seems to me to be comparable to a Kantian search for actual objects in the noumenal world. To succeed, the nonanthropocentrists apparently need to go beyond valuing based on the human perspective – which seems impossible.'[55]

Is it so impossible? Will not actual objects in the *phenomenal* world serve to take us beyond? Think of the animals, which – so we all believe – are out there, independently of humans. Listen to Rorty:

> The idea that we all have an overriding obligation to diminish cruelty . . . seems to take for granted that there is something within human beings which deserves respect and protection quite independently of the language they speak. It suggests that a nonlinguistic ability, the ability to feel pain, is what is important. . . [56]

Rorty takes continues: 'Pain is nonlinguistic: It is what we human beings have that ties us to the nonlanguage-using beasts.'[57] Amen, but this is precisely the first evidence we need of autonomous value and disvalue in these beasts, empathetically but transculturally known, to which we successfully refer with our word 'pain', sometimes in contexts in which we threaten value in their lives, which we ought to respect. Or, if the word 'value' is too European, then speak of 'goods' and it will be difficult to find a culture or a language without some such term, difficult to think some goods are not extra-culturally common to humans and animals. So we can see outside our sector, this far at least.

Rorty has been insisting 'that the world does not provide us with any criterion of choice between alternative metaphors, that we can only compare languages or metaphors with one another, not with something beyond language called "fact"'.[58]

So if one says that chimpanzees are only 'dumb machines', but another replies that they are 'living flesh and blood' suffering similarly to ourselves, and hence we ought not to perform experiments on them, are we stuck comparing metaphors with each other, without recourse to checking metaphors against facts of chimpanzee biology or behaviour? That is incredible. Such checking will be reported in language, but the behaviour is beyond our language. Chimpanzee 'pain' is unintelligible without reference to a non-human experience; 'increased pain' must report a state of affairs in which value is at stake.

Rorty wants to 'set aside the idea that both the self and reality have intrinsic natures, natures which are out there waiting to be known'.[59] So the two trading off their metaphors are really just choosing their self-images. But how about the idea that there is a chimpanzee self out there which can be known, not entirely, not 'absolutely', but sufficiently so that we find that the intrinsic chimpanzee self-integrity ought not to be lightly sacrificed? Such reference is forbidden by the epistemology of radical pragmatism, but just that reference is required for an adequate axiology of conservation. 'Intrinsic' is another word much frowned upon these days, but if there is no value held by the chimpanzee in itself, why should a human bother to save it?

Even if there is reference, is this not done from our perspective? Bernard Williams replies: 'A concern for nonhuman animals is indeed a proper part of human life, but we can acquire it, cultivate it, and teach it only in terms of our understanding of ourselves.'[60] Well, yes and no. The concern has to be ours, and our relation to animals will affect our self-understanding, especially with pets and domestic animals. But we also need to understand animals in their wild, non-cultural settings. Environmental ethics is not ethics by extension, not just humane moralism toward our cousins in fur and feathers.

We treat animals and humans differently, for instance not interfering in the pain of wild animals in distress, letting nature take its course, which would be monstrously cruel should we treat humans this way. Pain in a medically skilled culture is one thing; pain in wild nature, where animals have their integrity under the forces of natural selection, is another. 'Our ethical relations to each other must always be different from our relations to other animals.'[61] But just such valuing requires extra-cultural objectivity, a window outside our self-understanding. We have in common with animals the capacity for pain, but they live in wild nature, we live in culture superimposed on nature. In environmental ethics, one has to be discriminating about these differences.

It is not just the beasts with whom we have such ties. We share sentience with higher animals, we share vitality with the invertebrates, the plants, the protozoans. The net is valuable to the spider because the spider is able to value itself, valuable on its own. If we think not, we will have to ask, as an open question, 'Well, the spider has a good of its own, but is there anything of value to it?' We can know what the spiders eat, what they instrumentally value. Why is it so impossible to conclude that these spiders are valuing themselves? The world is full of eyes, legs, wings, antennae, mouths, webs and eggs, all being used in the defence of life. Is it consistent to say that animals defend lives that they do not value?

Nor need we suppose that this depends on minimal sentience in animals. Consider plants. Though things do not matter *to* plants, things matter *for* them. We ask, of a failing plant, what's the matter *with* that plant? Arranging for sunshine and fertiliser, can we ask, as an open question: The plant is benefiting from the sun and the nutrients, but are those valuable to it?' That hardly seems coherent *Benefit* is, everywhere else we encounter it, a value word. 'This tree was injured when the elk rubbed its velvet off its antlers, and the tannin secreted there is killing the invading bacteria. But is this valuable to the tree?' Biologists regularly speak of the 'survival value' of such things as thorns, stickseeds or nectar that attracts pollinators.

Every organism is a spontaneous, self-maintaining system, sustaining and reproducing itself, making a way through the world, checking against performance by means of responsive capacities with which to measure success. Its genetic set is a *normative set* in the sense that by such coding the organism distinguishes between what *is* and what *ought to be.* The organism is an axiological, though not a moral, system. So the tree grows, reproduces, repairs its wounds and resists death. A life is defended for what it is in itself, without necessary further contributory reference. Every organism has a *good-of-its-kind,* it defends its own kind as a *good kind.* In this sense, the genome is a set of conservation molecules.

These are observations of values which are at the same time biological facts. It is also true that science, just because of its desire for objectivity, is inadequate to teach us all we need to know about valuing nature. Yet value in nature, like value in human life, is something we can see and experience, and biology can help elucidate what these values are. Such values are biological facts – spiders value their nets and their lives – even if it remains true that such a value-laden world confronts us with further evaluative questions beyond science.

Yes, comes the reply, but the shapes these phenomenal values take reflect our constituting framework, whether it is the 'board-feet-of-timber' of the technologists, the 'intrinsic value' claims of environmental philosophers, or the 'caring' of ecofeminism, the 'enchanted worlds' of indigenous peoples or the 'creation' of biblical Judaism and Christianity. Reinterpreted pragmatically, the idea of 'intrinsic value' reveals that we are concerned with maintaining our human relations with these plants and animals, and that, in forming our self-understandings, we enjoy these experiences of nature and want to sustain them because they are intrinsically valuable *to us.* All these values come through with a human face; they have to be enjoyed by humans in their cultural places, as flesh-and-blood subjects incarnate in the world. So we are warned: Do not try to go beyond and fall into the mistake of thinking that you know anything objective about either nature or values there.

But that seems incomplete and unreal. Here is an account offered in the name of pragmatism, or neo-pragmatism, that seems most impractical in this denial that we humans can know anything outside our society, while we all know very well that we are residents on a planet where there is nature that transcends humans, and that various organisms pursue their own lives independently of our culture. This is as evident as that we are humans who live in culture. To fall back into conserving nature as, and only as, important in 'our cultural heritage' is to slip into another of these

anthropocentric illusions that have long plagued philosophy, the mind turned in on itself, once again, in a self-reflexive trap, unable to test either its facts or its values against an external world. The objectivity myth, so alleged, is replaced by a subjectivity (or inter-subjectivity) myth.

Environmental ethics is a lived ethics on a geographical landscape. This ethics must be inhabited; it takes narrative form and needs personal backing, interacting with nature. So why not accept that in such an encounter, nature always wears a human face?[62] Why all this insistence on otherness out there? Because the appropriate behaviour for humans, faced with ethical decisions here, often involves knowing what good there is in other lives, and remains there when humans face in other directions. Environmental ethics is about being native to a place, so why not think of it as choosing our human story? Because there is more story to consider, solidarity with a larger biotic community with whom we share this place, about whom we must gain truth enough to know something of their places before we can rightly choose ours. Nature may not be as given as the naive realists suppose; but, upon finding this out, we make an equally naive mistake to think that nature is not given at all. Moral agents are not found outside society; but it does not follow that morality, arising within society, cannot or need not find value in the natural world. This finding of value is going to have to be intellectually credible before it can be morally imperative.

We humans are a peculiar Earth-species. Social construction is necessary but not sufficient for our being. Some values on Earth are not species-specific to *Homo sapiens.* If other investigators from space – having found out about DNA and photosynthesis, or food webs involving lions and gazelles, or hyraxes and elephants – were to evaluate these phenomena, they would (or ought to) respond with admiring respect to these worthwhile achievements and conserve them, even though they themselves were not dependent for their energy sources on photosynthesis, nor had they themselves any DNA, nor eyes and ears like ours, even though they had no entwined destinies with the planet on which they were visiting and therefore no 'place' to establish for themselves in residence here. An extraterrestrial scientist ought not to experiment with chimpanzees if this causes great suffering; this is because of what chimpanzees are in themselves, even if these space visitors have no evolutionary kinship with the chimpanzees.

It is true that, on Earth, humans are the only evaluators who can reflect about what is going on on these global scales, who can deliberate about what they ought to do to conserve it. When humans do this, they must set up the scales; humans are the measurers of things. Animals, organisms, species, ecosystems or the Earth cannot teach us how to do this evaluating. But they can display what goods are to be valued. The axiological scales we construct do not constitute all the value, any more than the scientific scales we erect create all that we thereby measure. There is value wherever there is positive creativity.

Too much lingering in the Kantian conviction that we humans cannot escape our subjectivity makes us liable to commit a fallacy of misplaced values. We must release some realms of value from our subject-minds and locate these instead out there in the world, at the same time that we are involved enough to feel the bite that registers

values, getting past mere science to residence in a biotic community. If we cannot have that much truth, we have not only lost a world, we have become lost ourselves. Socrates claimed that the unexamined life is not worth living; that truth perhaps remains even if nature is not for real. Environmental philosophers also insist that life in an unexamined world is not worth living either. Humans miss too much of value, and for that we must have nature for real.

NOTES

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3. Arnold Berleant, *The Aesthetics of Environment* (Philadelphia: Temple University Press, 1992), pp. 3-4.
4. US Congress, *The Wilderness Act of 1964*, s. 2(c). 78 Stat 891.
5. Roderick Nash, *Wilderness and the American Mind*, 3rd edn. (New Haven, CT: Yale University Press, 1982), and summary conclusion, 'Wilderness is all in your mind', *Backpacker 7*, 1979: 39-41>70-5 (Issue no. 31).
6. Nash, *Wilderness*, p. xiii.
7. Richard Rorty, *Objectivity, Relativism, and Truth: Philosophical Papers, Volume 1* (New York: Cambridge University Press, 1991), p. 28.
8. Richard Rorty, *Contingency, Irony, and Solidarity* (New York: Cambridge University Press, 1989), p. 19.
9. Richard Rorty, *Consequences of Pragmatism* (Minneapolis: University of Minnesota Press, 1982), pp. 96-7.
10. Rorty, *Consequences*, 'The world well lost', pp. 3-18.
11. Richard Rorty, *Philosophy and the Mirror of Nature* (Princeton, NJ: Princeton University Press, 1979).
12. Rorty, *Objectivity*, p. 30.
13. Hilary Putnam, 'Why there isn't a ready-made world', in *Realism and Reason, Philosophical Papers*, Vol. 3 (Cambridge: Cambridge University Press, 1983), pp. 205-28.
14. Tens of thousands of Earth photographs have been taken by over 200 men and women from 18 nations, from virtually every continent, though they all took some Western education to become astronauts. Kevin W. Kelley (ed.), *The Home Planet* (Reading, MS: Addison-Wesley, 1988).
15. A similar Greek root is *physis*, whatever has sprung up, the originated physical, biological world. 'Nature' has multiple, overlapping meanings; Lovejoy gives thirty-nine. The commonest is 'what a thing really is', what is 'innate', inborn; things have their various natures. Our interest is the 'world out there' that has generated such things. See 'Some meanings of nature' in Arthur O. Lovejoy and George Boas, *Primitivism and Related Ideas in Antiquity* (Baltimore, MD: The Johns Hopkins Press, 1933), pp. 447-56; C. S. Lewis, 'Nature', in *Studies in Words*, 2nd edn (Cambridge: Cambridge University Press, 1967), pp. 24-74.
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17. Ibid., p. 89.
18. Ibid, p. 110.
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20. Ibid, p. 131.
21. Ibid, p. 34.
22. David E. Cooper, 'The idea of environment', in David E. Cooper and Joy A. Palmer (eds), *The Environment in Question* (London: Routledge, 1992), pp. 165-80, on pp. 167-9.
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36. Richard Dawkins, *The Selfish Gene*, new edn, (New York: Oxford University Press, 1989), p. 2.
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38. Rorty, *Mirror of Nature*, p. 367.
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44. Hilary Putnam, *Reason, Truth, and History* (Cambridge: Cambridge University Press, 1981), p. 54.
45. Ibid., p. 52, emphasis in original. Notice that 'objects' is in quotes in the first half of the sentence but not the last
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47. Recalling Plato, *Phaedrus*, 265e.
48. Putnam, *Reason*, p. xi.
49. Ibid., p. 55.
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51. Fred Hoyle, in Kelley, *The Home Planet*, inside front cover.
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58. Ibid., p. 20.
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