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NATURE AS CULTURE

John Dewey's pragmatic naturalism

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> ". . . genuine experimental action effects an adjustment *of* conditions, not *to* them: a remaking of existing conditions, not a mere remaking of self and mind to fit into them. Intelligent adaptation is always a *re*adjustment, a re-construction of what exists."
>
> John Dewey (LW 8:98)[1]

> "Nature is made better by no mean but nature makes that mean."
> William Shakespeare, *A Winter's Tale*, Act 4, Scene 4
> (quoted by John Dewey, LW 9:225)

1 THE GUIDING STARS OF DEWEY'S PRAGMATIC NATURALISM

It is as unfortunate as it is unfair that John Dewey has been read as an unabashed apologist for industrial expediency and unhampered business boosterism. One consequence of this has been the assumption that his work has little relevance to current debates regarding the status of non-human nature.[2]

It is true that Dewey was at one time the leader of a school of pragmatism known as "instrumentalism." But his pragmatism was never the vulgar sort that valorizes bald expediency. Nor was his instrumentalism the "straight-line" variety that works towards fixed goals, heedless of the collateral problems and opportunities that arise during the thick of deliberation.

It is also true that Dewey consistently argued that the continued development of experimental science is a necessary condition for the amelioration of the deplorable conditions under which much of the world's human population subsisted during his lifetime (conditions,

many of which have since deteriorated). But his notion of experimental science was both more comprehensive and more revolutionary than most of his contemporaries ever grasped, and his conception of its place in human experience was as co-laborer with other forms of inquiry, including the arts, law and politics, and not as their overseer. He consistently held that to view science as tool for the domination of nature is to honor a conception of science, as well as a conception of nature, that has been historically outgrown.

What, specifically, does Dewey have to contribute to the current debates regarding the relations of human beings to non-human nature? Unlike Henry David Thoreau, he did not go to the woods and there articulate an alternative to the stuffy life and genteel transcendentalism of Concord; unlike John Muir he did not develop an evolutionary pantheism in the course of a thousand-mile walk from Indiana to the Gulf of Mexico; and unlike Aldo Leopold he constructed neither land ethic nor land aesthetic based on experiences in the arid American Southwest and the lush farmland of Wisconsin.

In short, Dewey was not a field naturalist. Although his boyhood was spent in small-town and rural Vermont, Dewey's adult home was the city. Apart from his periodic recreational retreats to mountains, seashores and his farm on Long Island, from 1894 until his death in 1952 he lived first in Chicago, then in New York City.

But if Dewey was no field naturalist, he was a naturalist nevertheless. As a committed evolutionary naturalist, Dewey accepted and argued for the view that human beings are in and a part of nature, and not over against it. It was his contention that human life constitutes the cutting edge of evolutionary development (but not its telos), and this because, as he put it, it is only as human beings come to consciousness by means of social intercourse that self-reflection becomes a part of evolutionary history.

For Dewey, the principal difference between human beings and the rest of nature is not that there is no communication elsewhere than within human communities, but that human beings are unique in their ability to exercise control over their own habit-formation and therefore to alter in deliberate ways both the course of their own evolution and the evolution of their environing conditions. In other words, it is only with the advent of human beings that choice, and consequently morality, become a part of life on earth (EW 5:53), and it is only as human beings come to consciousness that nature comes to have "a mind of its own" (MW 4:29).

One of the clearest statements of Dewey's naturalism is found in his reply to George Santayana, who had charged him with advancing a "half-hearted" and "short-winded" naturalism. Santayana had argued that Dewey was only interested in "foreground," and that consequently the "rest of nature [in his philosophy] is reputed to be intrinsically remote or dubious or merely ideal."[3] To put a fine point on it, Santayana was accusing Dewey of ignoring, or worse, idealizing, non-human nature.

Dewey had thought his own naturalism such an obvious and fundamental part of his philosophy that he was astounded by Santayana's criticism. His reply was that

> [i]f the things of experience are produced, as they are according to my theory, by interaction of organism and environing conditions, then as Nature's own foreground they are not a barrier mysteriously set up between us and nature. Moreover the organism – the self, the "subject" of action, – is a factor *within* experience and not something outside of it to which experiences are attached as the self's private property.
>
> (LW 14:17)[4]

As further evidence of his naturalism, Dewey cited his appropriation of the radical empiricism of William James:

> My theory of the relation of cognitive experiences to other modes of experience is based upon the fact that *connections* exist in the most immediate non-cognitive experience, and when the experienced situation becomes problematic, the connections are developed into distinctive objects of knowledge, whether of common sense or of science.
>
> (LW 14:18)[5]

Finally, he responded that

> the proof of the fact that ***knowledge*** of nature, but not nature itself, "emanates"[6] from immediate experience is simply that this is what has actually happened in the history or development of experience, animal or human on this earth – the only alternative to this conclusion being that in addition to experience as a source and test of beliefs, we possess some miraculous power of intuitive insight into remote stellar galaxies and remote geological eons.
>
> (LW 14:19)[7]

In his response to Santayana, then, Dewey reveals the reference points by which the course of his naturalism has been charted. The first is his *instrumentalism*, which is his way of avoiding the traditional problems of both realistic and idealistic views of non-human nature. On the side of ontological realism, for example, seventeenth-century science and philosophy tended to view non-human nature as a clock-like machine, complete in itself. On the side of ontological idealism, some contemporary environmental philosophers have argued for a pantheistic version of the Gaia hypothesis, which in its extreme form holds that not only is the earth a self-regulating superorganism, but it is capable of deliberation in terms of its own ideals.[8] Looked at from a different angle, epistemological realists, including most neo-positivists, have argued that knowledge of nature is secured as its features are "mirrored" in separate human minds; and epistemological idealists, such as Berkeley, have contended that nature is a correlation among ideas.

For Dewey's instrumentalism, however, nature, as a complex of objects of knowledge, is neither complete in itself apart from human interaction, nor the locus of extra-human deliberation. It is neither directly given nor a mental correlation. Nature is instead a multi-faceted construct that has been slowly and laboriously built up over thousands of years of human history by means of various tools of inquiry, including the arts, religion, magic, hunting, manufacture and experimental science, to recall just a few. Nature is a construct, or cultural artifact, but it has not been constructed out of nothing. The raw materials of previous experiences and experiments, unanticipated events, chance insights, moments of aesthetic ecstasy, habits, traditions and institutions have all been continuously reshaped and refined by tools that have included religious rituals, philosophical treatises, novels, poems, scientific hypotheses, television documentaries, and many more.

The instrumentalism that supports Dewey's concept of nature-as-culture bears scant resemblance to the "straight-line" variety of instrumentalism advanced by seventeenth-century philosophers and scientists. His post-Enlightenment instrumentalism calls for careful attention to ends–means relationships at every step of deliberation. This is no less true when the domain of inquiry is non-human nature than when a musician chooses a subject for her song. Tools must be continually revised if they are to be appropriate to new tasks. Tasks must likewise be continually re-evaluated in the light of the tools available for their execution.

Nature-as-cultural-artifact is never finished. Because the rush of time and the jolt of novelty are observable features of experience, nature too, as a complex of objects of knowledge, becomes subject to ongoing re-evaluation and reconstruction in order to effect adjustment to changed and changing conditions. We may be able to get it better and better, truer and truer, but we never get it completely right. This is Dewey's *fallibilism.*

One of the most important features of Dewey's naturalism, so important that it almost becomes synonymous with his larger program, is his distaste of claims to transcendent knowledge. His *anti-transcendentalism* would have led Dewey to reject attempts by some environmental ethicists to "sacralize" nature as a thing-in-itself with values, interests or rights that are purely intrinsic to it and independent of human interests. What would he have made of the view of Carolyn Merchant, for example, that holds that "all living things, as integral parts of a viable ecosystem, . . . have rights"?[9] Should the one remaining sample of smallpox virus be set free from captivity, for example, because of its inherent rights as an integral part of a viable ecosystem? And what would he have thought of the biocentrism of Paul Taylor, with its claim that nature has "intrinsic" value, or value apart from its being valued "either intrinsically or instrumentally, by some human valuer"?[10] Dewey would, I think, have characterized Merchant's "rights" talk and Taylor's suggestion – that an ecological ethic can only be grounded in values never experienced, and perhaps not capable of being experienced, by human beings[11] – as having abandoned naturalism altogether for an excursion into an ideal realm.

Dewey thought it the function of intelligence to expand and enrich experience, and this with a view to the adjustment of experienced situations to new demands. Such adjustment is neither uniquely the alteration of environment for the sake of the experiencing subject, nor the accommodation by the experiencing subject to its environment. Because environments include experiencing subjects as parts, it is both accommodation and alteration.

If Dewey's naturalism eschews the transcendent, it is holistic none the less. Since human beings are a part of nature, their enriched experience of nature enriches nature's experience of itself. This is what Dewey means when he says that the production of the objects of knowledge involves the interaction of one part of the environment with other parts of the environment. At the same time, however, as he argued in his now famous essay "The Reflex Arc Concept in

Psychology" (EW 5:96–109), there is no knowledge without prior interest because it is interest that serves to initiate and focus inquiry. Our knowledge does not come to us fully formed from any region in which we have no interests. Some may wish to call this view "anthropocentric," but it is neither more nor less than a recognition of the fact that human beings transact business within environing conditions beginning where they are, and not where they are not. If "biocentrism" means taking a perspective that is other than human, then Dewey was no biocentrist. If it means, on the other hand, that it is characteristic of human intelligence that it continually broadens its purview, and that its best and most productive perspective is holistic, then Dewey's work from the 1890s onward was "biocentric."

Another component of Dewey's naturalism was his *anti-foundationalism.* This is the view, now recognized as one of the central theses of post-modern thought, that the search for epistemic foundations is both futile and unnecessary. One consequence of this is that the individual thinking self is not privileged, as it was for the architects of modern philosophy, Descartes, Locke and Kant. The self is itself a construct, and as such it is experienced neither foundationally, immediately, nor privately, but just as are other parts of the built-up environment of human knowledge. It further follows that there is no objective nature to provide a foundation for knowledge. Nature is not a "thing" but instead a complex and fecund matrix of objects and events, experienced in part as an expanding source of novel facilities and constraints, but nevertheless constructed within the history of human inquiry.

Dewey's *radical empiricism*[12] includes the claim that non-cognitive experience is capable of grasping relations. This is very important for an understanding of nature-as-culture because it means that we can grasp what hangs together in all of nature – human and non-human alike and together – as features of our most immediate and basic aesthetic experiences. In a moment I will suggest that this grasping-of-things-together was also an important stage in the development of the thought of Aldo Leopold.

Dewey recognized that it is notoriously difficult to retain moments of aesthetic insight. Even the most intense delights have a way of turning to dust in our hands. It is at this point that the cognitive portion of experience enters the picture. Cognition develops experienced relations by relating them to one another and making something new and more secure out of them.

But radical empiricism doesn't just say that we experience

relations; it also says that at the edges of the focal points of non-cognitive experience there are unfocused areas, or fringes. This amounts to a powerful antidote to the tendency to go transcendent, to posit a non-human world filled with independent values of its own.

In fact, it turns out that radical empiricism provides the benefits of transcendent views without their disadvantages. It allows us to acknowledge that there is a "beyond" to experience, just as transcendent views do. But it doesn't commit the fallacy of transcendent views, which is their attempt to say something *definitive* about what is experienced only as horizon. Regardless of where the focus of experience moves, according to radical empiricism, it is always fringed by vague areas of which we are only dimly aware but which may provide the opportunity for refocusing. Such refocusing is itself often the occasion for the production of new objects of knowledge.

What all this means is that we can get more and more intimately involved in terms of our experience of non-human nature without having to posit a realm in which animals and plants which are not conscious of themselves or in control of their own behavior have independently inherent "rights," or into which we may only enter provided that we have abandoned the perspective of human beings. The function of cognition is to extend human interest, and therefore human knowing, into areas of experience that had theretofore been no more than fringes or horizons of working knowledge. Properly nurtured, aesthetic delight gives rise to interests, which in turn motivate the kind of inquiry that eventuates in a robust interaction with ever wider dimensions of the human environment.

Radical empiricism does the work of transcendent views of nature, and it does it better. It describes and prescribes ways in which non-human nature can enter into the domain of human concerns, and thus into the widening circle of the moral, without appealing to *a priori* or *ad hoc* devices. Radical empiricism embraces a genuinely evolving naturalism that is rooted in the histories of natural events and that seeks to play a part in their further evolution; it is not, as are some versions of the Gaia hypothesis or most theories of "inherent rights of nature," a short-cut or ersatz naturalism based on the discontinuities of mysticism or logical leaps.

Taken together, radical empiricism and instrumentalism argue that what is cognitive arises out of what is non-cognitive by the intervention of intelligence. But the reverse is not true. Unlike Bertrand Russell, for example, Dewey is no reductionist: he does not claim

that the cognitive can be reduced to something primitive and non-cognitive.

Phylogenetically, historically, then, the cognitive emerges from the non-cognitive. This is Dewey's *genetic argument.* Whenever we think seriously about anything, ontogeny recapitulates phylogeny. Cognition is advanced and enhanced whenever it takes its own history into account. The roots of the normative aspects of any discipline grow in the fertile soil of the history of that discipline. By implication, if we are to advance normative claims with respect to non-human nature, then the history of inquiry in that area, including the history of religious, aesthetic, scientific and technological inquiries, must be taken into account.

Dewey's *constructivism* is a thread that runs through each of the other components of his naturalism, and thus deserves emphasis. Nature may be conceptualized in retrospect as nature-as-nature, or what is in fact experienced as immediately and unreflectively valued. In its richer sense, however, nature is also nature-as-culture, an artifact or complex of ideas that has proven valuable and continues to provide grounds for successful action. Nature-as-nature may be and often is the source of romantic or mystical responses that are deeply satisfying in their consummatory moments. But nature-as-nature is nature experienced haphazardly; experienced values have not been secured because their meanings have not been worked out and linked to one another. Nature-as-culture, on the other hand, is the product of conscious attempts to extend and link the meanings of nature in ways that secure experienced values by testing them one against the other in order to determine what can continue to prove valuable.

It is Dewey's constructivism that links these two conceptions of nature. In other words, the functional separation of nature-as-nature, or nature-as-valued, from nature-as-culture, or nature-as-valuable, does not render Dewey vulnerable to the charge of having regressed to a dualism of fact and value, or even a dualism of nature and culture, since what is valuable is a development that grows in ordered richness out of what is valued, and culture is thus continuous with and a part of nature. Nature-as-nature and nature-as-culture are not ontologically separate, but only functionally so. They are phases, earlier and later, of the expansion and extension of the meanings of situated human experience.

Dewey's position avoids the traditional split between facts and values by means of his contention that (a) values and relations are experienced (his radical empiricism), (b) facts are not just given but

always selected from a busy and complex environment as facts-of-a-case, that is, always and only in the context of a particular inquiry (his instrumentalism and his anti-transcendentalism), and (c) what is valuable is so only as a result of tests that have proven it to be a reliable basis for further action (his constructivism and his fallibilism).

2 DEWEY'S PRAGMATIC NATURALISM AND LEOPOLD'S LAND ETHIC

If these are the guiding stars of Dewey's naturalism, what course do they indicate for an environmental philosophy? One way of answering this question is to set Dewey's naturalism along side that of Aldo Leopold, allowing each to take the measure of the other.

Chapter 7 of Max Oelschlaeger's *The Idea of Wilderness*[13] provides an excellent guide to Leopold's work. Leopold's land ethic, writes Oelschlaeger,

> which states that humans ought to act to preserve the integrity, stability, and beauty of natural systems, gives Leopoldian ecology an explicitly normative dimension. . . . In Leopold's normative ecology the human species is viewed as a part of rather than apart from nature. Subsequently, the membership of sentient beings in the community of life entails obligations to preserve the land.[14]

This statement sums up in an admirable way the diverse and sometimes conflicting elements within Leopold's work. As a professional scientist, a forester, he had been trained to accept the demands of a *modernist* or "imperial" ecology, an ecology based on a search for epistemological foundations, a faith in quantification, a vision of linear and inevitable progress, an acceptance of the physical sciences as paradigmatic of all rationality, and a conception of nature as machine to be dominated and exploited.

On the other side, however, because of his own profound aesthetic sensibility, Leopold also felt the claim of a *postmodernist* or "arcadian" ecology that had been adumbrated by Thoreau and Muir, an ecology that rejected each of these modernist claims and sought to establish others in their stead. This would be an ecology that emphasizes human situatedness within nature, that holds that science is only one of many productive areas of human experience, that views progress as fragile and attainable only in piecemeal fashion, that treats knowledge as relative because perspectival and

fallible and that denies any absolute or final split between fact and value or between culture and nature.

By now it should be obvious that each of these components of postmodernist ecology was also a component within Dewey's naturalism.

In Oelschlaeger's story, Leopold's thinking moves through several developmental stages. From an initial acceptance of the modernist views, learned at Yale and in the employ of the Forestry Service, he moved first to an intuitive, aesthetic appreciation of the connectedness of natural events (bordering on a mystic organicism), and thence to an attempt to construct a land ethic of amelioration that takes into account "the interconnections between the cultural and natural worlds."[15]

Within this later phase, however, Leopold's vocabulary is complex and sometimes conflicted. He variously employed, according to Oelschlaeger's account, (1) an organic model of nature whose key idea is management, (2) a social model of nature whose central idea is community and finally, (3) an enriched organicism that held that "*natural species possessed intrinsic rights* to existence and that these sometimes took precedence over human rights."[16]

Leopold's field naturalism and Dewey's pragmatic naturalism turn out to have a great deal in common. Dewey's radical empiricism, for example, provides a key to understanding the incipient phase of Leopold's shift from modernist to postmodernist ecology. (Conversely, Leopold's shift provides an excellent example of Dewey's radical empiricism.)

Leopold's initial break with Forest Service doctrine was patently non-cognitive. He was profoundly influenced by the relations that he discovered within his aesthetic experience. Tempted to remain within the confines of that experience, he flirted with a transcendent, organic, vitalism. "Possibly, in our intuitive perceptions," he wrote, "which may be truer than our science and less impeded by words than our philosophies, we realize the indivisibility of the earth – its soil, mountains, rivers, forests, climate, plants, and animals, and respect it collectively not only as a useful servant but as a living being."[17]

But Leopold soon realized that it would be impossible to continue indefinitely this celebration of his non-cognitive experience. Mysticism qua mysticism does little work in the public sphere.[18] Beyond the continued celebration of it, the consummatory moment in aesthetic experience can be prolonged only by developing its

connections to other experiences. He came to realize that his non-cognitive vision must be reconstructed into an instrument that can function in the sphere of public science and public opinion. His subsequent vocabularies of management, community and the rights of species represent various stages of his attempt to reconstruct his initial experience in ways that would prove sufficiently valuable to have broad appeal and therefore to effect what he took to be ameliorative change.

Leopold never lost sight of the aesthetic dimension of his experience, however. He appealed to both elements within his experience, the non-cognitive and the cognitive alike, in his 1932 remark that a successful ecology must take into account a "residual love of nature, inherent even in 'Rotarians,' [that] may be made to recreate at least a fraction of those values which their love of 'progress' is destroying."[19] On the cognitive side, the term "management" appears as a key word in the title and the chapter headings of *Game Management*, one of his major works during this period.[20]

Leopold's "Rotarian" remark also contains a genetic argument. Evolutionary history equips human beings (even the most ardent land speculator) with a non-cognitive sensibility towards nature that may, if properly managed, provide the springboard for an enriched cognitive response to non-human nature that can take into account what is beyond the narrowly economic and utilitarian.

His remark is also constructivist and anti-foundational. He has recognized that any concept of nature that does real work in the domain of public affairs is a cultural artifact. "Although Leopold never escaped entirely from thinking of ecological facts as 'out there,'" writes Oelschlaeger, "he knew that the objective order of nature was a useful fiction. His research had repeatedly confirmed that Homo sapiens and nature were internally related."[21]

There are numerous parallels to Leopold's conceptual shift in the contemporary literature of environmentalism. Biologist Nathaniel T. Wheelwright, for example, has argued for respect for nature on the grounds of its "resplendence." Contending that it is "poor conservation strategy to bank on the arguments of ecologists or economists alone," Wheelwright has pointed out that the deterioration of natural environments and the loss of species diminishes what is "intricate" and "irreplaceable" and that aesthetic experience is thereby diminished.[22] This is an excellent example of an appeal to what most human beings "feel" about nature, which is something that can be reconstructed in such a way that it performs work in the public sphere.

To what extent is Dewey's pragmatic naturalism consistent with Leopold's environmentalism? Two out of the three metaphors that Oelschlaeger has identified as central to Leopold's thought are also found in Dewey's work. Dewey's pragmatic instrumentalism is an encouragement to "management," in just the Leopoldian sense, that is, as an intelligent reworking of what is unsatisfactory in order to render it more satisfactory. It is true that Dewey utilized the word "control," in connection with his instrumentalism, and that this has been the occasion for some of his critics, especially those of neo-Heideggerian temperament, to dismiss his views as unrepentantly modernist. But Leopold also wrote of "control." What both men mean by "control" is intelligent interaction within a situation in order to effect its improvement.

The second of Leopold's central metaphors, community, also occupies an important place in Dewey's work. There are two important senses in which nature can be understood as "community." In the first, non-human nature would be said to constitute a "community" in the sense of interacting populations, food chains, and so on. "Communication" within nature's community would, on this model, be a way of talking about equilibrating forces within an ecological system that maintain its stability as a whole and with respect to which human beings are either not involved or involved only marginally. This view of communication has the disadvantage of tending towards an idealization of nature that renders it transcendent of human interests.

In the second sense of "community," however, there is no break between human and non-human nature, and human beings themselves are regarded as one of many forces within the larger domain of nature. Communication would then be transaction among all relevant parts of nature, including the human part, that is, the part in which self-conscious intelligence emerges.

The term "management" takes on radically different meanings when applied to these two views of nature's community. The first view presents two scenarios. In the first scenario, that of the ontological idealist, the idea of management is replaced by the idea of respect, since nature is something that possesses ideals apart from those of human beings. In the second, the scenario of the ontological realist, management is imposed on a nature no less apart than that of the idealists, but which is, in this case, a machine to be maintained and repaired. Both of these positions have their roots in modernist thought.

In the second view of nature's community, human managerial skills become an active part of the ongoing evolution of a system of which human beings are also a part.

Both Leopold and Dewey understood "community" in the second of these senses, that is, in the postmodernist sense. Civilization is not, Leopold wrote, "the enslavement of a stable and constant earth. It is a state of *mutual and interdependent cooperation* between human animals, other animals, plants, and soils, which may be disrupted at any moment by the failure of any of them."[23] In short, evolution evolves. Continuing communication (ongoing adjustment of the various parts of the entire system to one another) is the condition for the continuing success of the whole.

This is also Dewey's sense of community, and it is his sense of management. In his 1898 essay "Evolution and Ethics," Dewey argued against the position taken five years earlier by Thomas Huxley in his Romanes Lecture. Huxley had taken the view that there has been a radical break in evolutionary history. The rule of the earlier "cosmic" processes had been struggle and strife. This was nature "red in tooth and claw." The rule of the emergent but now radically distinct "ethical" process would be sympathy and cooperation. And whereas the goal of the cosmic process was survival of the fittest, the goal of the ethical process would be that of fitting as many as possible for survival. Huxley had argued that "the ethical progress of society depends, not on imitating the cosmic process, still less in running away from it, but in combating it."[24]

Dewey thought that Huxley had capitulated to an unwarranted and dangerous form of dualism. In his reply he utilizes Huxley's own analogy of a garden in order to undercut his separation of nature from culture. "The ethical process," he writes, "like the activity of the gardener, is one of constant struggle. We can never allow things simply to go on of themselves. If we do, the result is retrogression. Oversight, vigilance, constant interference with conditions as they are, are necessary to maintain the ethical order, as they are to keep up the garden" (EW 5:37).

But what is the relation of the ethical (the cultural) to the process of evolution as a whole (the natural)? Dewey answers

> we do not have here in reality a conflict of man as man with his entire natural environment. We have rather the modification by man of one part of the environment with reference to another part. Man does not set himself against the state of

> nature. He utilizes one part of this state in order to control another part. . . . He introduces and maintains by art conditions of sunlight and moisture to which this particular plot of ground is unaccustomed; but these conditions fall within the wont and use of nature as a whole.
>
> (EW 5:37–38)

In other words, human activity, and therefore culture, is one part of nature. It is one of the ways that nature transacts business with itself. In intelligent gardening, just as in any other intelligent activity, one part of the environment is modified with respect to another part of the environment. Deliberation and intelligent management enter into the history of evolution.

It might be objected that Dewey has already gone too far; that he has allowed just anything that human beings happen to do to amount, by definition, to progress with respect to the whole. But Dewey meets this objection head-on by means of his pragmatic instrumentalism. Since the part of human beings within the evolutionary process is intelligent choice, it is not action *simpliciter*, but intelligent action that produces improved results and that therefore advances the process of evolution. Doing nothing and doing just anything are equally unintelligent, since they do not enhance the adjustment of one part of the environment to another.

Dewey's argument in this essay hinges on his notion of temporality. "Everyone must have his fitness judged by the whole, including the anticipated change; not merely by reference to the conditions of today, because these may be gone tomorrow. If one is fitted simply to the present, he is not fitted to survive. He is sure to go under" (EW 5:41). "The past environment," Dewey writes, "is related to the present as a part to a whole" (EW 5:46). Further, "evolution is a continued development of new conditions which are better suited to the needs of organisms than the old. The unwritten chapter in natural selection is that of the evolution of environments" (EW 5:52).[25]

If Dewey has undercut the grounds for a dualism of evolution and ethics, nature and culture, we are still left with the question of just how it is possible for "communication" among the features of the natural environment to occur. This is a matter that Dewey takes up in 1925 in Chapter 5 of *Experience and Nature*, where he presents his theory of communication as an essential ingredient of his naturalism. "Where communication exists," he writes, "things in acquiring

meaning, thereby acquire representatives, surrogates, signs and implicates which are indefinitely more amenable to management, more permanent and more accommodating, than events in their first state. By this fashion, qualitative immediacies cease to be dumbly rapturous" (LW 1:132).[26]

In other words, communication involves the taking of naturally occurring experiences and making something of them that increases their meaning by relating them to other naturally occurring experiences. This is a type of art that involves, in its turn, careful attention to the qualitative moments of experience in order that their traits may be made manifest, or expressed, by working out their implications.

Communication is a multiplier. It is not a matter of expressing something already there so much as it is a matter of "the cooperation in an activity in which there are partners, and in which the activity of each is modified and regulated by the partnership" (LW 1:141).[27] Communication opens up the doors of perception. We become "capable of perceiving things instead of merely feeling and having them. To *perceive* is to refer the present to consequences, apparition to issue, and thereby to behave in deference to the *connections* of events" (LW 1:143).[28]

Late in his career, and apparently as a reaction to the neo-positivism that was beginning to dominate academic ecology,[29] Leopold seems to have retreated to an organicism that holds that "*natural species possessed intrinsic rights* to existence and that these sometimes took precedence over human rights."[30] This is Leopold's third model of nature, and what he seems to have regarded as the basis for his now famous "Land Ethic." But Dewey's naturalism leads him to rejects this, as well as other varieties of free-standing or transcendent treatments of nature. He rejects foundations in earth as well as sky.

Like many other ethicists, Dewey held that moral rights exist only in the context of a community of moral agents. This is so because of the linkage between rights and obligations. Because there cannot be obligation in the absence of choice, and because it is only with the advent of human life that choice becomes fully a part of evolutionary history, it is a mistake to attribute intrinsic rights either to non-human species or to non-human individuals.[31] To speak of non-human species or non-human individuals as the possessors of intrinsic rights would in Dewey's view amount either to anthropomorphizing non-human nature or to opening up a chasm between human and

non-human nature by positing a domain of moral rights that does not involve moral agency and is therefore entirely separate from what human beings understand by the term.[32]

Does this mean that Dewey's naturalism regresses to a modernist anthropocentrism? Does his naturalism open the door to treating non-human species in any way we choose? It does neither. In order to understand why this is so it is necessary to recur to his radical empiricism and his idea that human beings experience nature non-cognitively as well as cognitively.

At the non-cognitive level, nature, both domesticated and wild non-human nature, is a source of intense and immediate aesthetic delight. Because of its immediacy, this type of aesthetic experience requires no warrant. It just is. Hunting, fishing, hiking, boating, bird-watching, celebration of the seasons, and many other forms of interaction with non-human nature, such as the enjoyment of pets, offer the occasion for such delight. The delights of breathing clean air, drinking pure water and the enjoyment of forests untouched by acid rain – all this is valued in its immediacy.

Dewey's radical empiricism also allows for the immediate experience of a "beyond" in the sense that immediately experienced delight possesses sensible fringes. Hints, gaps, leads and clues are experienced on the fringes of focused experiences. In its non-cognitive phase, then, nature is the source of both felt delight and wider expectation. Because of its commitment to radical empiricism, Dewey's naturalism is capable of promoting a piety with respect to non-human nature that is not encumbered by the epistemological problems of transcendent views of nature. A fringe is a vague indication of what may be to come, under the proper circumstances; of what is open to possible development, given sufficient interest.

It is at the cognitive level, however, that appreciation of nature is enlarged. Nature is understood both by means of the arts, as aesthetic experiences are secured and enriched, and by means of the sciences, as experiences are enlarged and related to one another through experimentation, abstraction and quantification. Both the arts and the sciences function in Dewey's work to expand the meanings of experience, and to secure what would otherwise have been immediate and transitory; but they do so in different ways. The arts "express" meanings, as he puts it, and the sciences "state" meanings.

Another way of putting this is to point out that Dewey undercuts the distinction that plagued Leopold throughout his career, namely the distinction between facts and values.[33] In order to do this, Dewey

distinguished between what is or has been valued and what has proven or might prove to be valuable. Values in non-human nature, and in human nature as well, are most often just experienced. As such they have not been secured as valuable, that is, they have not been reconstructed as platforms for further action. Dewey thought that values are secured as valuable just as their meanings are developed, enlarged and interrelated. This may be accomplished in the arts, as certain traits and qualities of materials are expressed in ways that single them out from others that are less interesting, less fecund or less evocative of further experience. It may also be accomplished in the sciences by means of experimentation, or the instrumental interaction with natural processes in which mere endings are replaced with consequences and consummations that are worthy of celebration and suggestive of further paths of deliberation.

Dewey's naturalism thus treats non-cognitive nature both as immediately *valued*, and as raw material for the construction of nature as culture, that is, nature as human artifact or nature as *valuable*. Given the complexity of human culture, with its many overlapping and competing interests, including the economic, the artistic, the political and the religious, to name just a few, it is nature-as-human-artifact that enters into public debates regarding the adjudication of conflicting interests. This is because one non-cognitive experience, since it is immediate, has no way of holding its own against the claims of other, potentially competing non-cognitive experiences. Its implications have not been worked out. But in nature-as-culture, implications have been drawn, connections made, and tentative conclusions reached.

3 ENVIRONMENTAL PRAGMATISM AND ENVIRONMENTAL PRESERVATION

The upshot of this is that Dewey's naturalism is capable of supporting Leopold's land ethic, i.e. the view that humans ought to act to preserve the integrity, stability and beauty of natural systems, but without Leopold's occasional lapses into an appeal to a realm of transcendent rights. This can be done by demonstrating that the integrity, stability and beauty of non-human nature is immediately experienced as valued, and further that these factors have proven valuable as a source of continually emerging values, including those that are aesthetic, economic, scientific, technological and religious. Each of Leopold's terms, "integrity," "stability" and "beauty,"

however, because it is a tool of inquiry and not an absolute whose meanings have been determined for all time, must undergo continual re-evaluation and reconstruction with respect to changing conditions.

Dewey's naturalism is consistent with and anticipatory of at least one current version of the Gaia hypothesis. As Frederic L. Bender characterizes it, Gaia presents four major challenges to traditional thinking about nature. First, traditional notions of individuality are challenged; second, traditional notions of fitness are challenged; third, Gaia intentionally blurs the traditional boundary between life and non-life; and fourth, Gaia's holism rejects the traditional focus on individual ecosystems in favor of attention to global relationships.[34]

Each of these points is also Dewey's. He argued that individuals are only so in the context of environing factors; that the notions of "fitness" must be greatly expanded (see his reply to Huxley); that the difference between life and non-life is primarily a matter of level of organization (LW 1:195);[35] and that intelligent deliberation takes as broad a view as is possible. As I have noted, however, Dewey rejected extreme views of Gaia, which hold that the global ecosystem has intelligence apart from that of human beings.

Dewey's naturalism is also consistent with and anticipatory of some forms of "restoration" ecology, such as that advanced by William R. Jordan.[36] Like Dewey, Jordan's leading metaphor is the garden, with its ancillary metaphors of "maintenance" and "reconstitution." Among the objects of his restoration interest are various portions of the Wisconsin prairie.

Like Dewey, Jordan recognizes that human life is not a "pernicious" factor outside environmental change, but one part of it. His goal is thus not to "protect" nature from human beings, but to "provide the basis for a healthy relationship between nature and culture."[37] He recognizes that restricting human participation in natural events (idealizing nature) is merely another way of fighting nature (the obverse of treating nature as machine), and that the real challenge of restoration ecology is to find ways in which human beings can come to view themselves as participating members of their environments.

Traditional nature activities such as boating, hunting and fishing are consequently parts of his program. "All of these are integrated into an event that is constructive rather than consumptive – as each of these particular activities is in its traditional form."[38] It is by means of these reconstructed activities that Jordan intends to "bring to our

attention aspects of our relationship with nature that otherwise we might not recognize."[39]

In short, Jordan thinks that the older versions of environmentalism (which I have argued rest on modernist versions of realism or idealism) have failed because of their fruitless attempts to isolate nature from culture. He thus sees his own restoration model as pragmatic. His intent is to increase the relevance and enlarge the application of Leopold's land ethic.

A key element in Jordan's restoration ecology is ritual celebration. By beginning with the immediate delight afforded by communal and festive (non-cognitive) interaction with natural events, such as programmed prairie burns, he believes that the basis can be laid for an enriched cognitive appreciation of the place of human life within its natural setting, and consequently that restoration will come to be seen as "both an effective [scientific] process and an expressive [artistic] act." "The idea," he continues, "is not merely to *decorate* restoration, but to develop it to enhance its expressive power."[40]

Because of his interest in scientific inquiry, Dewey would have approved of setting aside wilderness areas so that they can serve as laboratories for environmental scientists. But this is not to treat wild nature as apart, ideal, or "untouched." It is instead to preserve it as source of experimental data which would otherwise be lost. As Leopold notes, "A science of land health needs, first of all, a base datum of normality, a picture of how healthy land maintains itself as an organism. . . . Wilderness, then, assumes unexpected importance as a laboratory for the study of land-health."[41]

As a synthesis of the aims of preservationist and restorationists, the work of the Nature Conservancy is also consistent with Deweyan naturalism. As it continues its task of buying up and protecting wildlife habitats checkered within developed areas, both the scientific and the aesthetic dimensions of human experience are served and expanded. Each of these models of naturalism – restoration, preservation and the Nature Conservancy synthesis – can play a part in the wider project of adjusting one part of our environment to other parts in order to effect amelioration of the whole.

If my reading of Dewey is correct, then, his naturalism allows him to accept and defend the central tenets of Leopold's land ethic without the appeal to an idealized non-human nature that sometimes surfaces within his, Leopold's, work. I have argued that Leopold's attempt to provide a foundation for his ethic by this means is the least

workable and the least defensible feature of his otherwise excellent project. If I have made my case, then Dewey's work locates itself in the thick of current debates regarding the relations between human beings and non-human nature, and it offers the promise of continuing insights within this arena of experience.

NOTES

1 Standard references to John Dewey's work are to the critical edition, *The Collected Works of John Dewey*, edited by Jo Ann Boydston (Carbondale and Edwardsville: Southern Illinois University Press, 1969–1991), and published as *The Early Works* (EW), *The Middle Works* (MW) and *The Later Works* (LW). These designations are followed by volume and page number.

2 Dewey's British critics including Russell and his German critics, including Adorno and Horkheimer, read, or more properly misread, him in this way. Even George Santayana took up the refrain when he characterized Dewey as "the devoted spokesman of the spirit of enterprise, of experiment, of modern industry" and claimed that his philosophy was "calculated to justify all the assumptions of the American society." See George Santayana, "Dewey's Naturalistic Metaphysics," in *The Philosophy of John Dewey*, 3rd edition, ed. P. A. Schilpp and L. E. Hahn (La Salle, Illinois: Open Court, 1989), p. 247.

3 Schilpp and Hahn, op. cit., p. 251.

4 Ibid., p. 532.

5 Ibid., pp. 532–533.

6 The term "emanates" was Santayana's. Dewey allowed its usage in connection with his own view, provided that the "*aura* that clings to the word" be eliminated. See LW 14:19.

7 Schilpp and Hahn, op. cit., p. 534.

8 This is Frederic L. Bender's reading of James Lovelock. See Frederic L. Bender, "The Gaia Hypothesis: Philosophical Implications," in *Technology and Ecology*, ed. Larry A. Hickman and Elizabeth F. Porter (Carbondale, Illinois: Society for Philosophy and Technology Press, 1993), pp. 64–81.

9 See Carolyn Merchant, *The Death of Nature* (San Francisco: Harper and Row, 1980), p. 293.

10 Paul W. Taylor, *Respect for Nature: A Theory of Environmental Ethics* (Princeton: Princeton University Press, 1986), p. 75. Taylor does not base his biocentrism on the rights of individual non-human organisms, but rather on their status as "teleological centers of life" (p. 122). He does allow that human beings have the right to destroy predatory organisms, such as the smallpox virus, on grounds of self defense (p. 264).

11 Ibid., p. 99.

12 Dewey admits his debt to William James for his notion of radical empiricism. "Long ago I learned from William James that there are immediate experiences of the connections linguistically expressed by

conjunctions and prepositions. My doctrinal position is but a generalization of what is involved in this fact" (LW 14:18, note 16).

13 Max Oelschlaeger, *The Idea of Wilderness* (New Haven: Yale University Press, 1991).

14 Ibid., p. 206.

15 Ibid., p. 216. See Brian G. Norton, *Toward Unity among Environmentalists* (New York: Oxford University Press, 1991), especially pp. 39–60, for an account of Leopold's development that differs slightly from that of Oelschlaeger. Norton thinks that Leopold's position was better integrated than Oelschlaeger's, and I, believe it to have been. Norton does, however, make an interesting comment that relates to the notion of "nature-as-culture" that I am attempting to develop in this essay. He sees Leopold's work as "guiding the search for a *culturally* defined value in nature" (p. 58).

16 Oelschlaeger, op. cit., p. 228.

17 Aldo Leopold, "Some Fundamentals of Conservation in the Southwest," in *The River of the Mother of God and Other Essays*, ed. Susan L. Flader and J. Baird Callicott (Madison: University of Wisconsin Press, 1991), p. 95.

18 Leopold withheld "Some Fundamentals of Conservation in the Southwest" from publication during his lifetime.

19 Aldo Leopold, "Game and Wild Life Conservation," in Flader and Callicott, p. 66.

20 Aldo Leopold, *Game Management* (New York: Charles Scribner's Sons, 1936).

21 Oelschlaeger, op. cit., p. 227.

22 Nathaniel T. Wheelwright, "Enduring Reasons to Preserve Threatened Species," in *The Chronicle of Higher Education*, June 1, 1994, p. B2.

23 Aldo Leopold, "The Conservation Ethic," in Flader and Callicott, p. 183.

24 Thomas H. Huxley, *Evolution and Ethics and Other Essays* (New York: D. Appleton and Co., 1896), pp. 81–83, *et passim.* Quoted in EW 5:36.

25 See, however, the argument of Bob Pepperman Taylor that Dewey's view of nature represents no advance over that of Locke. Bob Pepperman Taylor, "John Dewey and Environmental Thought," in *Environmental Ethics*, Vol. 12, No. 2, Summer 1990, p. 183. Dewey was in fact quite critical of Locke's view of nature. Locke, Dewey writes, "was completely under the domination of the ruling idea of his time: namely, that *Nature* is the norm of truth. . . . Nature is both beneficent and truthful in its work; it retains all the properties of the Supreme Being whose vice-regent it is" (MW 8:59). The irony here is that if Dewey's reading of Locke is correct, then his (Locke's) view of nature is much closer to that of the idealistic environmentalists such as Paul Taylor than it is to Dewey's view. This is a point that Bob Pepperman Taylor apparently misses.

26 John Dewey, *Experience and Nature* (La Salle, Illinois: Open Court, 2nd edition, 1965), pp. 138–139.

27 Ibid., pp. 148–149.

28 Ibid., p. 151.

29 See Oelschlaeger, op. cit., p. 226 for an account of this.
30 Ibid., p. 228.
31 Dewey apparently did not know of Koehler's work with apes, and so he denies choice to non-human animals. Since self-reflexive communication is the basis of his account of responsible action, however, he might well have wished to have included non-human animals, such as chimps who have learned sign language and entered into communication with themselves and humans by its means, as moral agents and thereby the bearers of rights. In any case, Dewey was enough of an evolutionist that he was acutely aware of transitions within nature, and that the history of evolutionary development is more or less continuous, if not in the temporal sense, then at least in the functional sense. For more on Koehler, see W. Koehler, *Mentality of Apes* (London: Kegan Paul, 1924).
32 The question of legal (as opposed to moral) rights is, of course, a different matter. Legislators have in fact given legal rights to entities that are not moral agents. But legal rights are normally extended on the basis of human interests, and not on the basis of some putative status independent of human interests.
33 This tension is clear in Leopold's 1933 essay "The Conservation Ethic," where he writes of ethics as possibly a kind of "advanced social instinct." Whereas Leopold seems to think that there is already an ethics at work at the level of the aesthetic, Dewey would have argued that the primitive aesthetic response furnishes a platform for working out an ethical response to non-human nature. In the next paragraph, however, Leopold takes another tack. He suggests that the ethical dimension of the human relation to the land is still in the formative stage, and that "science cannot escape its part in forming them." Dewey would have argued that if a robust land ethic is to be developed at all, then science will have to play a part. See Flader and Callicott, op. cit., p. 182.
34 See Hickman and Porter, op. cit., pp. 68–71.
35 Dewey (1965), p. 208.
36 See William R. Jordan III, "'Sunflower Forest': Ecological Restoration as the Basis for a New Environmental Paradigm," in *Beyond Preservation: Restoring and Inventing Landscapes*, ed. A. Dwight Baldwin, Jr., Judith De Luce and Carl Pletsch (Minneapolis: University of Minnesota Press, 1994), pp. 17–34. Note that Dewey would have rejected the critique of restoration advanced by Eric Katz and others who have argued that the only real nature is nature that is "permitted to be free, to pursue its own independent course of development." Katz thus valorizes an extreme version of what I have called nature-as-nature, or nature as undisturbed, and he deprecates nature-as-culture, which he treats as a kind of forgery. The problem with this view, from Dewey's point of view, is that nature-as-undisturbed is also nature-as-unknown, since knowledge involves experimental interaction and therefore some measure of "disturbance." I have already addressed the epistemic fallacy that is committed by such views of nature-as-transcendent. The problem is this: what can human beings know of the values of non-human nature with which they, by definition, have had no contact? See

Eric Katz, "The Big Lie: Human Restoration of Nature," *Research in Philosophy and Technology*, Vol. 12, 1992, p. 239.

37 Jordan, op. cit., p. 21.
38 Ibid., p. 24.
39 Ibid. p. 24.
40 Ibid. p. 31.
41 Aldo Leopold, *A Sand County Almanac* (New York: Oxford University Press, 1966), p. 251.