J. Baird Callicott, Science, and the Unstable Foundation of Environmental Ethics

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Since its emergence in the 1970s, US environmental ethics has always been closely linked to ecological science. To be more specific, the former tends to draw heavily on the latter. This close association with ecological science makes environmental ethics a groundbreaking and highly stimulating field of inquiry. However it also makes the foundation for environmental ethics more precarious than most of its practitioners would wish it to be. On the one hand, environmental philosophers endeavor to convey a clear moral message and to provide readers with strong ethical guidelines, while on the other environmental ethics is, to a large extent, predicated on scientific knowledge which, in essence, is subject to and driven by change and innovation in the form of new findings. The upshot is that the edifice of environmental ethics rests on precarious grounds, on a shifting foundation that can radically undermine the moral prescriptions issued by environmental philosophers. The purpose of this article is to examine how environmental philosophers come to grips with this tension by taking J. Baird Callicott as a case-study.

J. Baird Callicott, one of the founders of environmental philosophy (Becher 139), taught the first course on environmental ethics at the University of Wisconsin-Stevens Point in 1971. His fifty-year academic career has resulted in a myriad of articles and seminal books, including *In Defense of the Land Ethic: Essays in Environmental Philosophy* (1989), *Beyond the Land Ethic: More Essays in Environmental Philosophy* (1999) and, more recently, *Thinking Like a Planet: The Land Ethic and the Earth Ethic* (2013). He remains a major figure, both admired and criticized for his work in US environmental circles, especially for the central role he has performed in the questioning of the notion of wilderness. One of his most significant contributions remains his steadfast commitment to, and interpretation of, Aldo Leopold’s land ethic (1966).
Change and mutability are central to Leopold's thinking, and thus to Callicott's. Both try to convince their contemporaries that the mutability of ecosystems should be taken into consideration when it comes to defining norms of human behavior. In order for them to act morally, communities need to acknowledge their membership of larger “land communities”, characterized by Darwinian change and constant adaptation. Callicott argues that a radical paradigm shift away from modernity and toward a reconstructive postmodern philosophy, informed by Darwinism, ecology and quantum theory, is a necessity, if the land ethic is to bring about significant change and become conventional wisdom. Ironically, however, Callicott’s emphasis on change and mutability may also contain the seeds of the destruction of the ethic thus propounded, as exemplified by the impact of disturbance ecology on the land ethic and Callicott’s defense of land ethic. Mutability is therefore a concept that is ripe with opportunities and with challenges: both a sine qua non and a threat.

New Developments in the Meaning of Community

Leopold’s land ethic was expounded in *A Sand County Almanac*, published posthumously in 1949 (Leopold 1966). Initially employed as a forester in the tradition of Gifford Pinchot’s utilitarian conservation, Leopold (1887-1948) gradually changed his perspective on the nature of man’s relationship with nature and on the meaning of conservation. Ecological science and Darwinism led him to conceive of the land as a community made up of interrelated parts, heavily dependent on one another and which thus form a coherent whole. Accordingly, the land ethic blurs the distinction between mankind and the rest of nature. For Leopold, man is part and parcel of nature, not a radically distinct entity. Leopold echoes Darwin, who had envisioned an extension of ethics in *The Descent of Man* (59-60). Leopold contends that the scope of ethics has gradually widened as humans have come to regard themselves as members not just of a family but also of a tribe, a region and a nation. In *A Sand County Almanac*, Leopold takes Darwin’s extension of ethics a step further by stating that ethics should now also encompass whole ecosystems:

> The land ethic simply enlarges the boundaries of the community to include soils, waters, plants, and animals, or collectively: the land… In short, a land ethic changes the role of *Homo sapiens* from conqueror of the land-community to plain member and citizen of it. It implies respect for his fellow-members, and also respect for the community as such. (239-40)

This extension of ethics led Leopold to a new moral maxim which, he hoped, would lay the groundwork for a more enlightened relationship between human communities and other living beings: “A thing is right when it tends to preserve the integrity, stability and beauty of the biotic community. It is wrong when it tends otherwise.” (262) J. Baird Callicott has been trying to convey Leopold’s ecocentric message to his fellow philosophers and to broader audiences since the 1970s.

Callicott endorses the land ethic, thereby eliminating Cartesian dualism which draws a clear line between nature and civilization as well as between the human species and the rest of nature: “I follow Darwin in thinking that human culture is continuous with primate and mammalian proto-culture and that, no matter how hypertrophic it may lately have become, contemporary human civilization remains embedded in nature.”
For Callicott, it is implicit that to embrace Darwin’s teachings about evolution entails the re-examination of the role of the human species in nature.

Aldo Leopold was both a professional conservationist and a professor of game management, he was not a philosopher, however. This explains, in part, why Callicott endeavored to elevate the land ethic to the intellectual plane of philosophy. He felt no qualms about conceding the philosophical limitations of the land ethic as expounded in Leopold’s work (Beyond Land Ethic 60). In his attempt to bring philosophical credibility to the concept of land ethic, he turned to David Hume and Adam Smith, since both thinkers had claimed that sympathy is the fountainhead of moral sentiments.

Callicott refers mainly to Hume’s *Treatise of Human Nature* and *An Enquiry Concerning the Principles of Morals*. According to Hume, man is instinctively able to determine whether an action is morally reprehensible or not. His moral sense is therefore shaped by his emotions and instincts, rather than by reason (Hume 297-98). Sympathy and altruism are intrinsically human, rather than social constructs (305), which enables Hume to assert that man is not merely selfish. The pursuit of self-interest, Hume argues, is not sufficient to give a full explanation of the roots of human behavior. Hume is however also quick to point out the limits of human sympathy (384).

Callicott draws on Hume’s theories in the formulation of his own ecocentric philosophy. In the process, he attempts to demonstrate that Darwinism, Aldo Leopold’s land ethic and his own thinking are all indebted to Hume. The influence of Hume’s and Adam Smith’s theories of moral sentiments is evident in Darwin’s *The Descent of Man* (1871). Several decades later, Callicott claims, Darwin’s application of evolution to the human species was to shape Leopold’s ethical reflections, which are now the basis of Callicott’s philosophy. Callicott’s interest in Hume thus informs two crucial trends in his thinking: the primacy of moral sentiments and the superiority of communitarian obligations over individualism (Thinking 9).

Thanks to Hume’s philosophy and Aldo Leopold’s land ethic, Callicott is able to present his own account of the origins of human morality:

1. we (i.e., all psychologically normal people) are endowed with certain moral sentiments (sympathy, concern for others, and so on) for our fellows, especially for our kin;
2. modern biology treats *Homo sapiens* (a), as, like all other living species, a product of the process of organic evolution; and hence, (b) people are literally kin (because of common ancestry) to all other contemporary forms of life; (3) therefore, if so enlightened, we should feel and thus behave [...] toward other living things in ways similar to the way we feel and thus behave toward our human kin. (125)

In the same way that Darwinism forms the scientific bedrock for the land ethic, Hume’s emphasis on moral sentiments constitutes the philosophical cornerstone of Callicott’s ethical propositions.

According to Callicott, the broader the range of moral patients in a given community, the more ethically sophisticated the community (Nelson 252-3). His dedication to an enlarged vision of community, including ecosystems, puts him at odds with the many branches of ethics that are predicated on individualism. As Callicott himself acknowledges, she who commits herself to the land ethic “will [...] be a far cry from the hard-edged, disengaged, dislocated individual of the Modern Western liberal tradition.” (Beyond Land Ethic 314) The perception of the self as a completely autonomous and self-sufficient entity fuels the well-entrenched philosophical ideas that Callicott is eager to displace. The notion of the self as an independent monad is a physical and
psychological impossibility. It makes no sense from the perspective of ecology, which places a premium on interconnections and interdependences, hence Callicott’s call for a radical transformation in our understanding of community and individuality.

Callicott is optimistic about the ability of moral sentiments and communitarian solidarities to evolve and broaden. He even thinks that the history of ethics is on his side: “The moral sentiments are undetermined and open-ended. We can learn to respect things today, such as universal human rights and animal rights, our nation-states, and our biotic communities, of which our remote ancestors knew nothing when the human moral sentiments were evolving.” (Ouderkirk 298) In other words, today’s community will not necessarily be identical to tomorrow’s community. The mutability and the protean character of community as a notion offer opportunities for the proponents of the land ethic.

Callicott’s broadening of community coincides with a broadening of the human self, which bears a close resemblance to Arne Naess’s deep ecological notion of Self-realization:

[...] oneself and other persons (which certainly would not exclude other animals) are nodes or nexuses in a skein of relationships —relationships with organisms both internal and external to one’s superecosystem. Through one’s superecosystem circulate water, various materials (both nutritious and poisonous) and the biogenic air. The material world, both in form of inert matter and living matter [...] crosses the fuzzy and penetrable boundaries of the superecosystem that is oneself. Through the pores of one’s skin, on the air one breathes into one’s lungs, in the water one drinks, and in the food one eats. (Naess 111)

Callicott believes that a human being is much more than a body and self-interest. The self can only be understood properly in the larger context of the multiple communities to which it belongs — family, region, nation, party, ideology, biotic community, to name only a few. Such a broad and elastic vision of the self is bound to seem excessive to many modern philosophers, which is not surprising since Callicott’s ambition is to precipitate the dawn of a postmodern age which will transcend modern individualism.

The Need for a Shift in Paradigms

Callicott’s entire philosophical endeavor is predicated on the simple notion that a radical change in worldview is required for his contemporaries to solve the tremendous environmental challenges of the 21st century. No solution will be found as long as a great paradigm shift, to paraphrase Thomas Kuhn to whom Callicott explicitly refers, does not come to pass (Beyond Land Ethic 302). In fact, Callicott is convinced that the great paradigm shift is already underway and that modernity is doomed to disappear.

Callicott regularly proclaimed the end of the modern idea of nature (1992: 16), which originated in the scientific revolution of the 17th century with Descartes, Newton, and Bacon, among others. This idea of nature is inherently linked to a fundamental dichotomy between man and nature, subject and object, mind and body. Catherine and Raphaël Larrère see this approach as conducive to a radical subjugation of nature by human science and technology, since nature is perceived as “shorn of all mystery and enchantment, and as a created entity that can be disposed of and manipulated.” (Larrère 58-9, my translation) Callicott asserts that despite the prestige and appeal of the modern idea of nature, its scientific justification no longer holds much weight.
In the second half of the 19th century and in the early 20th century, Darwinism, ecological science and the theory of relativity threatened to discredit Cartesian dualism. The tenets of Darwinism invalidated the notion that the human species is in essence radically different from others; ecology insists on the centrality of the interaction and interdependence found in nature, as epitomized by ecosystems. The theory of relativity makes it impossible to posit a sharp and fundamental separation between subjects and objects (Callicott 1989: 165-6). Callicott argues that these scientific developments have fatally undermined modernity:

Ecology is not just an arcane sub-discipline of biology. Like the theory of evolution, it is pregnant with vast philosophical implications. Indeed, ecology, along with the theory of evolution and relativity and quantum theory in physics, is propelling a sea change in the Western world view, a paradigm shift [...] I would go further still and suggest that ours could be one of those moments in history [...] that come but rarely in human cultural development: a moment in history not unlike the Golden Age of Greece when Western art, literature, philosophy, and democracy were born; or Renaissance Europe when Modern Science and technology began to take shape. (Beyond Land Ethic 287)

Thus, the modern worldview, Callicott contends, is a losing proposition which continues to shape human affairs, and which is one of the great paradoxes of our time. To his mind, the modern worldview is therefore doomed to be replaced and superseded by a new worldview. The relevant question is to determine when it will happen.

Unsurprisingly, Callicott’s call for a postmodern vision of nature came in for considerable criticism in environmental circles, especially because of his attack on the notion of wilderness as it helps perpetuate the anti-ecological nature/civilization dichotomy. Callicott was accused of condoning the adversaries of environmental protection, by providing them with arguments to the effect that nature is a myth and therefore need not be protected (Callicott 2008: 351-4). Such accusations prompted Callicott to clarify his position:

Note that my Darwinian-Leopoldian naturalization of culture is opposite the stance of other postmodern environmental philosophers who culturize [...] nature. They argue that nature is culturally (or socially) constructed, whereas I argue that culture is naturally evolved and remains a part of nature. (Ouderkirk 300)

Callicott’s approach to the origins of ethics allows him to eliminate this dualism, without endangering the justification for ethics: natural evolution has provided the human species with a moral sense, according to Darwin, Leopold, and Callicott. It is therefore possible for the human species to see itself as part of nature and therefore to treat nature morally.

Callicott appears almost desperate to dissociate himself from deconstructionism, or French theory. He wants to cast himself as a postmodern philosopher, while insisting that his ethical propositions will not lead to a relativistic dead end: “Absent a comprehensive and culturally shared new myth, we are left with plural points of view, perspectives, multiple outlooks — each of which has an equal class on truth” (Beyond Land Ethic 161), so much so that Callicott faults Jacques Derrida and Richard Rorty for spreading a nihilistic message (163). He even bemoans the advent of the “new Dark Ages of deconstructive différence, without even the minimum methodological agreements required for resolving differences of opinion by informed reasoned argument.” (165) Callicott’s statements regarding Derrida testify more to his desire to avoid being seen as a postmodern enemy of environmental protection than to an in-
depth knowledge of Derrida’s actual philosophy, which is far from being antithetical to environmental awareness (Clark). Callicott’s main concern is to avoid promoting deconstructive theories which, he argues, may turn out merely to be destructive.

A dominant paradigm is not only necessary in and of itself. Callicott contends that it is furthermore desirable. He considers his interpretation of postmodernism to be reconstructive, since its function is not to liquidate all worldviews, but rather to help mankind embrace a renewed one, predicated on the lessons of Darwinism, ecology, and the New Physics: “If Western philosophy played a major role in the creation of the prevailing dualistic mechanistic Western worldview, then Western philosophy would seem to have a major role to play in deconstructing it, and in reconstructing a new ecological-organic worldview.” (Beyond Land Ethic 39) The fact that postmodernism can be defined in many different ways (Rey 63) makes it easier for Callicott to lay claim to it.

Change or mutation brought about by a scientific paradigm shift is factor which creates philosophical opportunities, as demonstrated by Callicott’s blueprint for an ecocentric postmodern age, although it also begets what is an unstable state for ethics. The fruits of future scientific research are at best uncertain. The emphasis laid on change and on scientific developments which is at the heart of Callicott’s ethic may contain the seeds its very destruction.

The Ecology of Chaos vs the Land Ethic

Callicott has repeatedly proclaimed the superiority of the scientific method: “Before any critical experiments are designed, a scientific theory is brought before the tribunal of the logical law of noncontradiction. Scientific narratives are likely to be internally more consistent than other alternatives, and therefore, more tenable.” (Callicott 2001: 91) Self-correction is what sets the scientific method inherited from the scientific revolution apart from other epistemological approaches. Furthermore, the scientific method is highly responsive to the evolution of human experience. Callicott’s emphasis on the role of science is all the more crucial insofar as “the facts of ecological science yield the oughts of the land ethic.” (Ouderkirk 40) This, however, has prompted some of Callicott’s detractors to affirm that ecology is too unstable a field to serve as a reliable foundation for ethics (239). The main weakness in Callicott’s ethical apparatus undoubtedly lies in the unending capacity of the scientific method to call into question the state of accepted knowledge, as was made evident by the challenge to the land ethic brought about by the advent of disturbance ecology.

In the 1970s, ecological research began to stray away from the principles which had defined it since the mid-20th century. As epitomized in the work of American scientist Eugene E. Odum, ecology had hitherto revolved around the notions of stability and harmony. Yet it was not long before this vision of undisturbed and self-perpetuating ecosystems was questioned and replaced by disturbance ecology and the nature-in-flux paradigm. Change and disruption, rather than stability and harmony, were thus to be apprehended as the driving force behind ecosystems, if indeed these even existed in the first place. The historian Donald Worster introduced and discussed the main features of what he called the ecology of chaos, in his article “The Ecology of Order and Chaos” (1990):
We look for cooperation in nature and we find only competition. We look for organized wholes, and we can discover only loose atoms and fragments. We hope for order and discern only a mishmash of conjoining species, all seeking their own advantage in utter disregard of others. (Worster 9)

The upshot is that it now makes less ecological sense to define ecosystem health as stability and for the analyst or observer to systematically regard disruption and stochastic change as unwanted and necessarily harmful. To make matters even worse, from the Leopoldian viewpoint, ecosystems whose relevancy can be questioned, have at best ill-defined boundaries, a feature which undermines the case for studying them as self-sufficient and self-regulating entities.

S.T.A. Pickett and P.S. White note, in their introduction to The Ecology of Natural Disturbance and Patch Dynamics (1987), the seminal book on disturbance ecology, that “equilibrium landscapes would [...] seem to be the exception, rather than the rule.” (Pickett and White 5) While by no means downplaying the ability of ecological researchers to understand their natural environment, Pickett and White focus on the need to pay more attention to the central role of natural disturbances:

A systematic and comprehensive approach to the study of disturbance is essential, given its primary role and the inherent complexity of disturbance types and impacts. Without such an approach, ecologists will continue to catalog disturbance patterns and biological responses with little hope of comprehension emerging from the chaos. (165)

It should come as no surprise that the impact of disturbance ecology extended well beyond the confines of scientific research and has had an effect on environmental ethics as well. The emergence of disturbance ecology brings to the fore several inconvenient questions regarding the land ethic: does it still make sense to refer to a land ethic, when dealing with natural phenomena which are liable to sudden and unpredictable radical change? How can consideration be granted to natural entities whose boundaries resist precise definition? Callicott confronted these questions head-on, writing extensively on disturbance ecology (Callicott 2009: 177-93).

Callicott integrated disturbance ecology within an updated version of the land ethic. He did so by way of a distinction between two kinds of perturbation, one that is consubstantial to the functioning of ecosystems and, as such, does not clash with biotic integrity, whereas the other, stemming from large-scale technological and industrial development, is unnecessary, destructive and is therefore unethical. Scale is the criterion adopted here, in order to determine whether the changes at work in a given ecosystem are beyond the pale of the land ethic. The instability resulting from technocultural development is of such great magnitude that it becomes essentially different from other non-anthropic disturbances:

In general, frequent, intense disturbances, such as tornadoes, occur at small, widely distributed spatial scales. And spatially broadcast disturbances, such as droughts, occur less frequently. And most disturbances at whatever level of intensity and scale are stochastic (random) and chaotic (unpredictable). The problem with anthropogenic perturbations—such as industrial forestry and agriculture, exurban development, drift net fishing, and such—is that they are far more frequent, widespread, and regularly occurring than are nonanthropogenic perturbations. (Beyond Land Ethic 136-137)

Not all changes are identical. From the perspective of the land ethic, some perturbations are accepted, while others are not, man-made climate change being a case in point. Relying on the distinction between legitimate and illegitimate change,
Callicott revised and updated Leopold’s land ethic in order to make it compliant with disturbance ecology: “A thing is right when it tends to disturb the biotic community only at normal spatial and temporal scales. It is wrong when it tends otherwise.” (138)

Science remains central both to Callicott’s ethical reflections and to the vulnerability of his ethical propositions regarding the unstable and volatile state of scientific knowledge. The land ethic is scientifically driven. It is therefore highly responsive to contemporary developments and is thus able to address new challenges. It may however also be considered to be unreliable and ever-shifting, as a foundation for ethical guidelines. Whether this uncertainty will appeal to Callicott’s contemporaries remains a moot point.

Conclusion

Callicott has compelling reasons to believe that modernity is about to be displaced. Faced however with the many challenges of climate change, the depletion of natural resources due to unsustainable global economic growth and the ongoing mass extinction of species that is occurring worldwide, the question as to whether modernity will morph into Callicott’s ecocentric worldview or move towards the creation of an increasingly artificialized environment is a moot point. Callicott’s optimistic view suggests the advent of a global and multicultural convergence toward a non-anthropocentric consensus, informed by the postmodern scientific vision (Callicott 1997: xiv-v). Others, who are as concerned as he is with our current environmental predicament, argue that the pervasive influence of human action on the biosphere may lead mankind to try to control nature even more, if only to address the problems it has created. Yuval Harari (448-51) has recently described the huge potential of biotechnologies for the 21st century, while geoengineering is sometimes touted as a credible means through which to address climate change. According to this vision, the influence of global industrial civilization on the biosphere is considered to have become so deep and so far-ranging that the only viable option remaining is that of further control through science and technology. By contrast, Callicott’s alternative vision amounts to a radical rejection of the continuation of the Cartesian narrative.

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NOTES

1. Ecosystem as a notion is attributed to British scientist Arthur Tansley in 1935. Tansley and Leopold knew each other, and their ideas were close intellectually.

2. There is an element of irony to Callicott's use of Hume's philosophy. The philosophers who attempt to derive ethical norms from the observation of natural phenomena are often accused of committing the so-called naturalistic fallacy, which Hume is said to have conceptualized. According to this view, science can shed light on the laws of nature, but cannot convey any moral message. Ethics, in other words, cannot be grounded in nature, because nature merely exists, without heeding moral considerations (for a more detailed introduction to the naturalistic fallacy, see Hess 99 and DesJardins 169). In order to address this objection, Callicott turns to Darwin's *The Descent of Man*, claiming that ethics is merely a by-product of natural evolution. Thanks to sympathy, which Callicott sees as being consubstantial to human nature, ecological knowledge gives us a sense of our belonging in nature, which in turn breeds ethical consideration for nature (for Callicott’s full defense against the naturalistic fallacy charge, see Callicott 2013: 36, 71). As a result, Callicott does not perceive the naturalistic fallacy as an obstacle to his use of Hume as a philosophical justification for his ethical propositions.

3. Callicott is well aware that Hume could not have been familiar with Darwinism, let alone with the land ethic. Yet, he argues that linking Hume’s views on the moral sentiments to Leopold’s ethic does not represent an anachronism, for though moral sentiments only apply to human beings in Hume’s work, their scope can be updated and enlarged in the light of scientific developments that occurred after Hume’s death. In effect, what Callicott does is to explore new territory by extending Hume’s theory to non-human entities.

4. In Naess’s work, self-realization is consubstantial to the rejection of Cartesian dualism and to the integration of the human into the nonhuman. Naess contends that awareness of the ontological bond between the human species and nonhuman life can come about in ways that differ from one individual to another (Gestalt formation). (60-61) These various processes lead to the flourishing of a new conception of the self in harmony with the spirit of Deep Ecology. Eric Katz calls it “an expanded self-identifying with the natural world.” (Katz 25)
ABSTRACTS

This article analyzes the ideas of American philosopher J. Baird Callicott to shed light on ecological thinking and its inherent commitment to change and the adaptation of US environmental ethics. Callicott is one of the most prominent and longest-serving practitioners of environmental ethics; he is especially known for his support of land ethic, as defined by Aldo Leopold, and ecocentrism, an ethic predicated on the perception of ecosystems as communities. Callicott draws on the works of David Hume, Adam Smith and Charles Darwin to justify a Leopoldian ecocentrism. Extending Hume’s and Smith’s theory of moral sentiments to non-human life and ecosystems, Callicott claims to have continued Darwin’s ethical reflections in *The Descent of Man* (1871), also taken up by Aldo Leopold after his conversion to the ecological worldview. Callicott argues that the meaning of community can and must be protean, in order to ensure that environmental destruction will not continue unimpeded. Callicott thus calls for a major paradigm shift away from modernity, as defined by the scientific revolution of the 17th century, to a reconstructive postmodernity informed by Darwinism, ecology and the “new” physics spawned by quantum theory. According to Callicott, the only effective way to transcend Cartesian dualism is to bring about a major change in people’s worldview. Short of such a shift in paradigms, the dualities at the root of the environmental crisis will persist. Ironically, one of the main challenges to Callicott’s defense of the land ethic came from within ecology, from what Donald Worster calls the ecology of chaos. If Callicott rescues Leopold’s land ethic from ecological insignificance, this is because of the advent of disturbance ecology in the 1970s and 1980s along with the gradual replacement of the balance-of-nature paradigm by the nature-in-flux paradigm. How can ecosystems be considered communities if they are subject to stochastic and catastrophic change? Distinguishing the scale of non-human change and anthropogenic change, Callicott salvages an ethic whose ecological foundations are precarious and unstable. In doing so, he demonstrates that just as adaptation is part of a natural evolution, it is also the key to intellectual and philosophical evolution. Callicott’s response to disturbance ecology nevertheless highlights the precarious position of environmental philosophers who predicate their moral prescriptions on scientific knowledge, given that the science of ecology is always evolving.

Cet article vise à éclairer l’influence de la pensée écologique, et tout particulièrement de notions telles que le changement et la mutation, sur l’éthique environnementale aux États-Unis en analysant l’œuvre de J. Baird Callicott, aujourd’hui l’un des philosophes de l’environnement les plus influents outre-Atlantique. Callicott a dédié une part considérable de sa carrière à la mise en avant de l’éthique du vivant (*land ethic*) créée par Aldo Leopold au milieu du 20e siècle. Afin de donner ses lettres de noblesse philosophiques à la proposition éthique de Leopold, Callicott s’appuie notamment sur David Hume, Adam Smith et Charles Darwin : en appliquant aux écosystèmes et aux espèces non-humaines les théories des sentiments moraux de Hume et de Smith, Callicott affirme ne faire que poursuivre un processus commencé par Darwin dans *La Filiation de l’homme* et développé par Aldo Leopold dans son *Almanach d’un comté des sables*. Selon Callicott, l’élargissement du sens que l’espèce humaine confère aux liens communautaires est une nécessité impérieuse face à la multiplication des défis environnementaux. Callicott en vient à préconiser l’avènement d’un changement de paradigme, qui devra conduire l’humanité à adhérer à une « modénité déconstructrice » informée par le darwinisme, la science écologique et l’apport de la physique quantique. Callicott espère que cette transition conduira au remplacement du dualisme cartésien entre l’espèce humaine et la nature par une vision écocentriste du monde en vertu de laquelle l’espèce humaine se conçoit comme intégrée au
vivant et non comme radicalement différente de lui. Pourtant, c'est la science écologique elle-même qui fragilise le plus les propositions éthiques de Callicott à travers l'apparition, à la fin des années 1970, de ce que l'historien Donald Worster a appelé l'écologie du chaos. L'attention grandissante que les écologues apportent alors aux perturbations et à l'instabilité du vivant contraint le philosophe à faire évoluer l'éthique léopoldienne en insistant sur le caractère discriminant de l'échelle des perturbations : par la rapidité et l'ampleur des dégâts qu'elles provoquent, certaines perturbations d'origine anthropique ne sont pas moralement acceptables. Le parcours philosophique de Callicott démontre ainsi l'importance de la capacité d'adaptation dans l'évolution intellectuelle et philosophique. Mais il souligne aussi la situation précaire des philosophes de l'environnement qui fondent leurs prescriptions morales sur des savoirs scientifiques. Ces savoirs jouissent d'un grand prestige depuis la révolution scientifique mais ils sont par nature toujours susceptibles d'évoluer.

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Mots-clés: Callicott J. Baird, éthique de l’environnement, éthique du vivant, écocentrisme, anthropocentrisme, écologie

Keywords: Callicot J. Baird, environmental ethics, land ethic, ecocentrism, anthropocentrism, ecology

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