What Leopold Learned from Darwin and Hadley: Comment on Callicott et al.[1]

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ABSTRACT

This comment explains why the claims of Callicott et al. in their paper 'Was Aldo Leopold a Pragmatist?' (*Environmental Values* **18** (2009): 453–486) are incorrect. The arguments they make are shown to be based upon several misunderstandings. In addition, important contributions by Aldo Leopold to the philosophy of conservation are missed.

KEYWORDS

Environmental Pragmatism, Leopold, Hadley, Darwinian epistemology

I. INTRODUCTION: UNDERSTANDING PRAGMATISM

In a paper recently published in *Environmental Values* Callicott et al. (2009) question whether Aldo Leopold was influenced by American Pragmatism and claim that he was in fact repelled by it.[2] I argue they misunderstand the ideas Leopold absorbed from Hadley and the Pragmatists while attributing to him views he never espoused. Most of the textual evidence they cite, and resulting arguments, are then irrelevant. These misunderstandings cause them to miss what is most important in Leopold's contribution.

The four 'bedrock beliefs' Callicott et al. (2009: 457) claim I attribute to Pragmatists fail to characterise a coherent, substantive philosophy (see Norton 2005).[3] While Pragmatists may hold diverse positions, Bernstein (1997) lists five 'interrelated substantive themes that enable us to characterize the pragmatic *ethos*'.

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(1) *Anti-Foundationalism*. This rejects claims that all knowledge must 'rest ultimately on a foundation of noninferential knowledge or justified belief' (Fumerton, 2000; 2010).

(2) *Fallibilism*. Pragmatists believe that every one of our beliefs is open to challenge, but do not embrace scepticism: 'although we must begin any inquiry with prejudgments and can never call everything into question at once, nevertheless, there is no belief or thesis – no matter how fundamental – that is not open to further interpretation and criticism' (Bernstein, 1997: 287).

(3) *The Social Character of the Self*. Since all of our beliefs are considered fallible, we, individually, are always limited in perspective, and yet knowledge creation proceeds. Truth must be pursued through a community of inquirers, and correction of beliefs is a social activity. 'Logic is rooted in the social principle' (Peirce, 1986: 284). Since our thoughts are thoroughly linguisticised, the language of a community shapes thoughts as communicated.[4]

(4) *Radical Contingency*. Pragmatists believe that the universe is wholly contingent, involving chance, and humans and human communities need to make sense of it. The linguistic categories we divide the world into reflect our language, are constantly open to revisions, and these will track changes in activities more than abstract thought.

(5) *Pluralism* is advanced as a *description* of the world we encounter; this welcomes diversity and recognises that humans value nature in multiple, possibly incommensurate, ways (Minteer and Manning, 1999). 'What makes this task [of understanding] so difficult and unstable', says Bernstein (1997: 397), quoting Richard Rorty, 'is the growing realization that there are no uncontested rules or procedures "which will tell us how rational agreement can be reached on what would settle the issue on every point where statements seem to conflict"'. This means accepting multiple worldviews and perspectives, and seeing them as essential to the social learning process. As Bernstein (1997: 399) says: 'Here one begins with the assumption that the other has something to say to us and to contribute to our understanding'. The emphasis in epistemology shifts from seeking algorithms that identify the 'right' answer in complex situations based on foundational 'truth' to devising processes of free and open speech that allow diverse communities to find common ground and act cooperatively.

Callicott et al. conflate Pragmatism with economic utilitarianism and with capitalistic boosterism, a conjunction found in Hadley, but in hardly any other Pragmatist. In fact, most pragmatists have been critical of economic utilitarianism and were especially disdainful of economic determinism. Callicott et al. first conflate Pragmatism with utilitarianism, capitalism and growth economics,

and then in turn equate these broad, imprecise ideas with Hadley's discussion of social Darwinism. They create a many-headed monster they call 'Pragmatism' that bears no relationship whatsoever to the Pragmatist definition of truth that Leopold quoted, or the ideas I think shaped Leopold's thought. Virtually all of the argumentation in their paper is directed at ideas of Hadley that can be easily divorced from the definition and its use. I never said or intimated that Leopold adopted all of Hadley's ideas, nor is it accurate to call all of Hadley's ideas 'Pragmatism'. Leopold used Hadley's definition specifically to provide a corrective to Pinchotian utilitarianism, as a way to cut through ideology and place an emphasis on the longevity of a culture as the criterion of knowing how to live on the land.

Leopold in fact turned Hadley's definition back upon his pro-capitalist ideology. The key to this understanding – that Leopold incorporated Hadley's definition as a criterion for judging cultures, but that he rejected Hadley's optimistic capitalism – lies in Hadley's own qualification of his criterion. He says, 'Of course this is a doctrine that needs to be applied with great care', because such a test is fraught with the 'danger that we may take too short periods of history under observation, and think that an idea or an institution has won the race when it is riding most hurriedly toward its downfall' (quoted in Norton, 2005: 68)[5] Somehow, Callicott et al. thought I had ascribed every belief of Hadley to Leopold, when in fact I narrowly described Leopold's use of Hadley's 'definition' as simply providing a 'model' for comparing cultures and assessing their longevity as a test of the practices and, in turn, the beliefs those practices are based upon.[6]

By focusing at the cultural level, Leopold is invoking the Pragmatist notion of *communal experience* (Bernstein's theme # 3). He is not referring to a Lockean or Humean version of individual, atomistic experience floating in spaceless consciousness, but to a communal test of multigenerational survivability. Given the social nature of 'logic', every culture can be understood as an experiment in living in a place. The longevity of such experiments provide a test of the beliefs and actions of that culture.

This interpretation also explains why I do not think Leopold thought it important to use 'right' (as Hadley did) rather than 'true' as he himself did. For Pragmatists, action and survival test ideas; knowing how to live in a place involves both knowledge and values. Experience is the ultimate arbiter of truth *and* right. While this is often called the 'scientific' method, for Pragmatists, it applies to morals no less than to scientific hypotheses.

Leopold and Hadley both used Hadley's definition/criterion as a shorthand to express an extension of Darwinism to cultures, the insight that behaviour, not ideology, is what determines survival; the motto is a brief way of endorsing the crucial role of 'experience'. A community is put to the test of survival by a changing and sometimes hostile environment in its place. Practices, culture

and language, are ultimately tested by success of the 'experimenters', not by comparison to a pre-linguistic world (Dewey, 1920). Beliefs are sorted by the success of the cultures that hold and act on them. We see this experimental spirit in Leopold's disdain for conservation theorising in a vituperative he would no doubt hurl at most environmental ethicists today: 'We have many ideas as to what needs to be done, and these ideas quite naturally conflict. We are in danger of pounding the table about them, instead of going out on the land and giving them a trial. The only really new thing which this game policy suggests is that we quit arguing over abstract ideas, and instead go out and try them.' (Quoted in Meine and Knight, 1999: 211.)

We also see Leopold's Pragmatism in his pluralism – his cautions regarding language and interpretation. For example, in discussing with interest and respect Ouspensky and organicism, Leopold (1923/1979: 139) says, 'There is not much discrepancy, except in language, between this [organicist] conception of a living earth, and the conception of a dead earth, with enormously slow, intricate, and interrelated functions among its parts, as given by physics, chemistry, and geology.' This is a clear expression of William James's (1909) idea of living in a 'pluriverse'.

II. HOW LEOPOLD USED PRAGMATISM

The use Leopold makes of Hadley's definition is found in the crucial passages near the end of *Some Fundamentals*. Callicott et al. take Leopold's reference to Hadley and quotation of Hadley's definition of 'truth' to be one element in an attack on anthropocentrism, an ironical attack that ridicules Hadley's definition.[7] This interpretation arises because the definition is used within a passage that exhibits irony where that is taken to mean 'the use of words to express something other than and esp. the opposite of the literal meaning' (p.465). However, Leopold can be interpreted as being deadly serious and literal, although his reference to the definition is a sort of shorthand for a more complex idea. He can then be seen as recognising, along with other Pragmatists, that Darwin's findings (connecting survival and fitness) could be fruitfully applied to epistemology and to environmental management. A culture's practices will determine its longevity; if you want to judge a culture, don't listen to its rhetoric, observe its *practices* and determine if they could survive for many generations. Leopold invoked Hadley's definition, cashing in his own experience summarised in earlier sections of the essay, and provided a critique of the land management of government agencies (including his own, the Forest Service). Leopold was making an argument that current practices were immoral because the resource systems of the Southwest were being rapidly degraded.

COMMENT ON CALLICOTT ET AL.

The central error Callicott et al. make in understanding Leopold's meaning can best be seen by examining the overall structure of the essay, *Some Fundamentals*. They treat the concluding section, 'Conservation as a Moral Issue' (CMI), as severed from the general argument of the paper, and fail to see that the three final pages comprise a coherent capping off of the argument. This essay was a summary of what Leopold had learned by applying his unmatched observational abilities and associated tenacity in keeping a written record of changes he observed in the land during countless days of 'horseback reconnaissance'. Leopold's *experience*, his observation that current management was failing, caused him to declare the current, utilitarian approach to resource management unlikely to survive. CMI reacted to Leopold's empirical summary that cited multiple cases (overgrazing, destruction of watercourses, etc.) of degradation of resources under the land-management regimes of the Europeans. Leopold invokes Hadley's definition as a criterion, showing that his current management regime was failing the test of long-term survival.

The CMI section provides a 'survey' of possible ethics to apply to rapid land degradation, but also, and more importantly, it states a coherent argument that, in dealing with the public and decision makers, the anthropocentric position – despite its susceptibility to misuse and the deep ironies it poses for human managers and human beings – can provide an ethic that is sufficient to guide us toward better policies. Rather than seeing Leopold as adopting a single ethic and criticising or ridiculing all alternatives, he can be seen as looking for a system or systems of thought that would support his criticisms of specific practices he and his colleagues engage in, and as a guide toward better policies.

Callicott et al.'s interpretation of CMI requires accepting Leopold is engaged in a specific type of irony. I agree that there is irony involved in CMI. However, the irony does not obviate the use Leopold makes of Hadley's definition within his argument, nor does it suggest that Leopold was rejecting that definition.[8] Callicott et al. (p. 465) say:

> people do not usually state things ironically when they think they are true. On the contrary, people usually state things ironically when they think they are false. That, we contend, is exactly what Leopold does in 'Some Fundamentals' when he writes, '(How happy a definition is that one of Hadley's which states, "Truth is that which prevails in the long run"!)

If it were true that sentences used ironically are normally considered false by their speakers, every instance of the following sentence forms, however completed, would be confused and considered anomalous: 'It is an ironic fact that …' or, 'Once we discovered the truth that … the full ironies of the situation became obvious.' So, I challenge Callicott et al.'s key premise that, if Leopold is engaged in irony in the passage in question, he must be rejecting and even 'ridiculing' Hadley's definition.

Callicott quotes one (of several possible) definition(s) of 'irony' as 'the use of words to express something other than and especially the opposite of the literal meaning' (p. 465). This is an inappropriate definition for the case at hand. The appropriate one is: 'A combination of circumstances or a result that is the opposite of what might be expected or considered appropriate: as, it was an *irony* of fate that the fireboat burned and sank' (*Webster's Unabridged*, p. 970). Contra Callicott's understanding, it is hardly suggested that the fireboat did *not* burn and sink, but rather that it *ironically* did itself in, in its nefarious purpose. Similarly, Leopold thought it ironic that all cultures seem to believe the earth is for them, and yet they disappear, and the earth survives. According to Darwin, and Hadley's 'happy' definition, their claimed 'nobility' is tested in their longevity, not in their ideology.

Leopold adopted the pragmatic maxim of experience as the judge of cultures and he emphasised practices more than ideologies. This is not social Darwinism. Leopold is using a Darwinian analogy to connect to the broader theme of *Some Fundamentals* with an ethic concerned with longevity. He had found his ethical touchstone in Darwin: while it is good and important to discuss the big ideas, always remember that the test of truth and right is survival and adaptability. If Leopold in 1923 is seen as a pluralist who was comparing multiple worldviews and theories, hoping to learn something from each of them, it is easy to see him as also seeking a basis of critique for his own management failures, one that applies independently of any ideology or worldview, and he found one in Hadley's (1913: 129–133) test of survival. So there is no reason to adopt the extreme interpretive step of reversing the obvious meaning of Leopold's words despite the presence of irony.

Thus, CMI is being given two directly contradictory interpretations. Callicott et al. claim that, because Leopold uses irony we 'obviously' should not take his endorsement of the Pragmatic definition seriously. For them, CMI is a disorganised ethical rant based on a rejection of the beliefs of all of his colleagues and friends, an endorsement of nonanthropocentrism in opposition to his culture's deepest beliefs. This opposition presupposes that Leopold, in search of the one, true ethic, saw the moral issue as an all-or-nothing affair. They think that when Leopold says, regarding anthropocentrism, 'I will not dispute the point', Leopold thinks anthropocentrism is so ridiculous as to be unworthy of argument and that he arrogantly dismisses the most deeply held beliefs of his colleagues and neighbours as worthless. On their interpretation, Leopold – by meaning the exact opposite of what he in fact wrote – 'excoriated' anthropocentrism, and engaged in an ethical rant, revealing a dogmatic Leopold who ridicules the views of other scientists and religious people.

On my interpretation, Leopold starts from a pluralistic basis, trying to learn from a number of viewpoints. In the end, while he clearly honours and endorses nonanthropocentrism as personally inspiring, he realistically proposes that, at

least in pleading before 'most men of affairs' (Leopold, 1923/1979: 140), the conservation ethic be based primarily on an anthropocentric basis, despite the deep ironies involved. Reasoning that, since most of the members of his culture accept anthropocentric views, he need not dispute anthropocentrism because he can exploit the anthropocentrists' implicit claim that humans are the most noble creature: 'If we are *logically* [anthropocentric]', then we must stop the ignoble activities of degrading Southwestern resources. To Leopold's scathing eye, current grazing activities looked to him like those of a potato bug, 'which exterminated the potato, and thereby exterminated itself' (Leopold, 1923/1979: 141). On my interpretation, Leopold is a careful observer and a 'lover of the truth', and CMI is rather a thoughtful cataloguing and winnowing of philosophical views, but a winnowing that works by assessing survivability, not metaphysical speculation. This remarkable early summary established for Leopold that, however interesting are ideologies and metaphysical speculations, he would ultimately rely upon empirical assessments of the sustainability of practices over many generations as his bottom-line test of truth and right in conservation management. The CMI, if read as pluralistic rather than monistic, exhibits an inclusive system of value, taking inspiration from one (organicism), and practical impacts from another (anthropocentrism). This open-minded, cooperative Leopold is described by Minteer (2006) and fits comfortably into a pattern of 'civic pragmatism' with his friends and fellow reformers (including, for example, Benton MacKaye and Liberty Hyde Bailey), who emphasised not ideology but pragmatic pursuit of a variety of public values.

Learning from multiple viewpoints – the mark of pluralism and Pragmatism – then, allows Leopold to embrace both nonanthropocentrism for its inspiration and anthropocentrism as a practical path. In contrast to monists, pluralists see this as the natural interpretation of Leopold's argument, which draws insights from Ezekiel, an anthropocentric theist, a philosophical organicist, John Muir and nonanthropocentrists, and William Cullen Bryant, an anthropocentric poet.

III CONCLUSIONS

On Callicott et al.'s interpretation, Leopold became disheartened by Pinchot's over-emphasis on productivity and rapid development policies, and switched to Muir's strong nonanthropocentrism. In defiance of his direct words and his normal demeanour, Leopold is regarded as denouncing the anthropocentric views of his scientific colleagues and most religions of the world, and dogmatically dismissing anthropocentrism without so much as an argument. The Callicott interpretation pictures him ridiculing the President of his university, making fun of the deepest beliefs of his friends, and charting a lonely path forward in opposition. On this view, Leopold, driven by monism and facing a dichotomous

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choice, left the conservation movement with the same polarisations and ideological disagreements that separated Muir from Pinchot, merely switching sides. The Callicott et al. interpretation of *Some Fundamentals* short-changes Leopold's contribution, reducing his deep insights to ideological dogmatism.

On my interpretation, Leopold recognised the diversity of conservation goals and the values people cite, and he developed a means to *integrate* human and nonhuman 'interests': he embraced anthropocentrism as requiring stewardship for future generations and embraced values far beyond Pinchot's production goals for the National Forests. Leopold thought that both ideologies provided adequate reasons to be critical of current management of public lands in the Southwest, and he sought to integrate multiple values within a multiscaled system requiring adaptive management. Accordingly, he adopted the rule of experience (forsaking ideology), pointing the way toward adaptive management and social learning, with emphasis on process and achieving balance within communities that take responsibility for their 'place'. My interpretation places Leopold squarely in this tradition of 'third way' reformists, progressives who ardently and consistently criticised economic determinism in favour of empowerment of democratically organised communities.

Callicott and followers draw heavily on 'The Land Ethic' (Leopold, 1949) as the source of their interpretation of Leopold's moral theory, emphasising a passage where Leopold refers to 'rights' of species and a place where he speculates that nature's value must be what philosophers contemplate. My core interpretation points to Leopold's most basic instinct, his tendency to think like a scientist and to treat the problems of environmental management – including problems about goals and values – to be matters to be resolved by experience, and tested in the crucible of community action and debate. Accordingly, I look for evidence about Leopold's search for better practices and actions in his discussions of management failures and what he learns from them. Especially, I draw attention to the 1923 essay which, on my reading, includes *both* a scientific summary of observable degradation of Southwestern resources *and* a very perceptive review of ethical possibilities to criticise it. Two other essays, 'Marshland Elegy' and 'Thinking Like a Mountain' (1949), guide my interpretation and point to Leopold's profound understanding of the problems of scale, and fascination with the mismatch between the paces of change between human, experienced time, ecological time and geological time (Norton, 1990; 2005, especially Sections 6.3 and 6.4).

I attribute to Leopold a key role for Pragmatic epistemology that emphasises survivability of cultures as the ultimate test of 'experience', which shifts our attention from ideology to Leopold's successful anticipation of hierarchy theory, as embodied in 'learning to think like a mountain'. Seeing Leopold as developing a scale-sensitive, multi-generational model for thinking through environmental policy quandaries enables one to see that Leopold, far from

fighting again the first-generation conservation battles, was pointing toward a new direction, a direction that would emphasise 'adaptation' and cooperation. On this view of Leopold, one sees his anticipation of adaptive management processes as opportunities to learn by doing; but it also recognises that Leopold had provided a remarkable anticipation of what we would today call a concern for 'sustainable living'.

NOTES

[1] I acknowledge helpful comments by Ben Minteer, Piers Stephens and Robert Kirkman. Because I disagree with Callicott et al. on so many points both broad and deep, it is impossible to address every point of disagreement between us within the length limits set here. More detail can be found in Bryan Norton, 'Leopold, Hadley, and Darwin: Darwinian epistemology, truth and right,' School of Public Policy Working Paper # 55, Posted February, 2010. http://www.spp.gatech.edu/aboutus/workingpapers.

[2] Capitalised 'Pragmatism' will refer to American Pragmatism, while uncapitalised use will mean a practical and experimental approach to everyday problems.

[3] See, especially, the Appendix to Norton (2005) on linguistic pragmatism.

[4] Callicott et al. inaccurately claim that, for pragmatists, philosophical problems are linguistic in nature and therefore *unimportant*. See Norton (2005).

[5] Removing these points from controversy would apparently also undermine Callicott et al.'s attempts to show that my ideas are at odds with Flader's excellent account and with Darwin, himself.

[6] See Hadley (1913) pp. 127–131, where Hadley explains in detail, generally parallel to Leopold's argument, how applying Darwin at the cultural level can determine the truth embodied in the behaviours and traditions of a society by measuring its longevity.

[7] I replace Leopold's (1923) use of 'anthropomorphism' with 'anthropocentrism' which better captures his meaning.

[8] This also avoids the interpretive gymnastics the authors use to argue that Leopold first lauded Hadley's definition, then ridiculed it, and yet later reversed himself and used it as the epigram for a publication.

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