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Leopold, Hadley, and Darwin: Darwinian Epistemology, Truth and Righti

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Leopold, Hadley, and Darwin: Darwinian Epistemology, Truth and Right[i]

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Abstract

It has been argued in this journal (Callicott, et.al., 2009) that the evidence advanced that Aldo Leopold was influenced by American Pragmatism is "imaginary," and that apparent textual evidence that Leopold learned key ideas from A.T. Hadley, President of Yale University and a self-avowed Pragmatist, can be explained away. It is shown that Callicott, et. al. misunderstand pragmatism, misunderstand what environmental pragmatists have attributed to Leopold, fail to understand either the context or the internal argument of Leopold's "Conservation as a Moral Issue." Consequently, they miss important contributions that Leopold made to the philosophy of conservation.

Key Words: Environmental Pragmatism, Leopold, Hadley, Darwinian epistemology

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Part 1: Introduction.

Despite feeling seriously outnumbered, I must respond to the detailed and text-based arguments thought by Callicott, et. al. (2009), to bear on the question whether Aldo Leopold was influenced by American Pragmatism. [ii] I also feel some level of confidence, despite the gang tackling, since my "imaginings" regarding Aldo Leopold were thought to require the labor of no less than six defenders of orthodoxy. In my response, I will mostly not dispute what is in the written record, published or otherwise. Instead, I will argue (1) that Callicott and his followers misunderstand the ideas Leopold absorbed from Hadley and the pragmatists, and they attribute to Leopold many Hadlean views that Leopold never espoused, nor have I said or implied that he did; (2) that most of the textual evidence cited and the arguments brought forward based on that evidence are simply beside the point, and (3) that their misunderstanding on this point causes them to miss what is most important in Leopold's contribution to our understanding of how to live in harmony with natural systems.

After this brief introduction, Part 2 will begin by clarifying one point on which I was perhaps unclear in the1988 paper and, building on that clarification, I will articulate more precisely the key Pragmatist idea that Leopold took from Hadley and used ubiquitously throughout his career, the idea that *experience* is the unified epistemological method of both ethics and epistemology. This discussion will illuminate more precisely what Leopold absorbed from Hadley, which emphasizes Hadley's epistemological views more than the social views Callicott, et. al., rail against. In particular, I will correct Callicott, et.al.'s mistaken equation of utilitarianism, progressivism, and social Darwinism, because it causes them to and miss the key point that Leopold adopted a post-Pinchotist version of progressivism that I, and others, call the "third way," which steers between Economistic utilitarianism and robust, monistic nonanthropocentrism (Norton, 2005, pp. 72-73; Minteer, 2006). Then, in Part 3, I will concentrate on the proper interpretation of Leopold's formative essay, "Some Fundamentals of Conservation in the

Southwest," (*"Some Fundamentals")* (1923), arguing that Callicott et.al.'s reading of this essay totally misses the signposting Leopold included in order to make the final section of that essay a coherent argument. Under their reading, the last section of "Some Fundamentals" is a disorganized ethical rant. Finally, in Part 4, I will look back at the evidence, textual and otherwise, that Leopold rejected what he learned from the most popular teacher at Yale. In the Conclusion, I will mention the unfortunate consequences of failing to recognize Leopold's early and important appeal to the Pragmatist method of experience, and of learning by doing.

Part 2: What, Exactly, did Leopold Learn from Pragmatists?

In my 1988 essay, "The Constancy of Leopold's Land Ethic," I made claims that I would reformulate today, not because I have forsaken my belief that Leopold adopted and used important elements of a Pragmatist philosophy throughout his life, but because I would revise somewhat how I describe that constant element. There is no question that Leopold underwent an important change between, say, 1920 and 1935, perhaps making the title of my 1988 paper misleading to some. I would also agree that this change involved a rejection of Pinchot's ardent utilitarianism as an adequate and comprehensive guide to conservation management—again, I believe that Callicott and I agree on this. The disagreement, rather, involves what, exactly, changed, and what Leopold's ideas became.

In the 1988 essay, I also cited a passage from Hadley in which, referring to William James, he celebrates the beliefs that "have preserved our fathers as an intuition and act on [them] as an instinct" (Hadley, 1913, p. 73) That phrase, taken out of context, may have encouraged readers to think I was attributing to Leopold acceptance of all or most of Hadley's ideas and, especially, that I see the "instinct" on which we act as static and unchanging. Today, I would skip the reference to intuition, which implies far less dynamism than Leopold's approach to learning through action, and instead I would emphasize that the key idea Leopold took from Hadley was a Pragmatic approach to knowledge in both science and morality. Leopold's beliefs, I should have said, despite significant changes in other respects (including a rejection of utilitarianism as a reliable and complete guide to conservation policy), held tightly throughout his career to a general epistemology based on experience. With respect to this latter commitment,

Leopold never strayed from the central epistemological idea of pragmatism: there is one method, and only one method for pursuing the truth, and that method is the method of experience. Learning in science depends upon it; learning how to live a full life depends upon it; and learning what is right and ethical is also a matter of experience.

I realize now that my particular way of making my point—claiming a "constancy" in Leopold's thought--misleadingly overstated my case. By 1923, Leopold had fastened onto the Darwinian/Pragmatic idea of testing "ideas" by observing the outcome of actions based on those ideas—experience. This aspect of his thought did not wane, and even intensified over time. Today, I would more circumspectly say that the other changes Leopold underwent between 1923 and his death were less important than, and mostly derivative upon, this central idea, because it functioned throughout his life as an antidote to ideology and disagreement without experimentation. More specifically, in response to Callicott, et.al.'s statement that according to me, "Leopold underwent no significant philosophical change in his long career as a practicing conservationist," I would clarify that he underwent no change in his philosophy of management, and that his rejection of utilitarianism—already full-blown in 1923 on my interpretation—was based more on empirical observation of management failures on the Southwestern Forest Reserves than on ideological speculation.

While on the topic of Leopold's changing views of utilitarianism, I should correct Callicott, et.al.'s misleading suggestion that I think Leopold, subsequent to his embrace of Pragmatism, continued to embrace Pinchot's version of utilitarianism. Indeed, Callicott, et.al. conflate Pragmatism with capitalistic utilitarianism, which misses the key implication that Leopold found a "third way" between Pinchot's utilitarian resource management and outright nonanthropocentrism (Norton, 2005, pp. 72-73).[iii] In fact, I understand the final section of *Some Fundamentals* to embody a first step in his declaration of independence from Pinchot and his strongly production-oriented version of anthropocentric utilitarianism.

My point about constancy was to say that Leopold had adopted this idea of the epistemology of experience for a very specific purpose, and this change had already taken place by 1923. Leopold considered the failing managerial efforts of land managers in the Southwest (himself included) as the relevant "experience" for refuting Pinchot's

utilitarian boosterism. My point, then, in emphasizing what stayed the same in Leopold's "philosophy of management" was the rule of experience—if the practices of a culture destroy the land and relationships on which the culture depends, it does not have the truth; in particular, Leopold already knew—based on his observation of the negative impacts of applying Pinchot's utilitarian management idea that the test of experience was proving that idea "false".

I thought I had made it clear that I attributed only a narrow aspect of Hadley's philosophy when, in section 2.3 of Sustainability, I introduced the ideas that I attribute to Leopold as embracing the pragmatic method, with emphasis on an evaluative "model" Leopold adopted and used. Particularly, Leopold meant to apply the rule of experience to the management of the Southwest Territories: he, like Hadley, saw in the method of experience a Darwinian criterion that cuts through ideology and focuses on practices, on how a culture treats its land. In this case, it was a handy way of comparing the practices of various cultures by "measuring" their impact on the same expanse of semi-arid land he currently managed. Once it is recognized that the "model" I claim Leopold borrowed from Hadley does not entail an endorsement of Hadley's "jingoism" and praise for capitalism, the bulk of the Callicott et.al., paper is irrelevant to the current discussion because most of the paper is devoted to criticizing Hadleian ideas that neither Leopold, nor I, accept any responsibility for.

Part 2A: Pragmatism: Some Core Ideas

Before we can assess how this more targeted, epistemological understanding of Leopold's debt to the Pragmatists affected him, it is necessary to begin with a reasonably accurate summary of what Pragmatists' most centrally believe. While agreeing with Callicott and colleagues that it is important to recognize diversity among Pragmatists, I do not recognize any of the four "bedrock beliefs" Callicott, et.al., claim I attribute to Pragmatists (Callicott, et. al., 2009, p. 457) and I certainly do not endorse these statements just because they assert I believe them. Even if they can associate their phrases with snippets of my writings, that does not mean these foreign-sounding phrases reflect what I mean by Pragmatism, and taken together, these supposedly bedrock beliefs add up to no coherent philosophy such as I develop in (2005).

A better try at providing a coherent account of the core themes of pragmatists is

found in an essay by Richard Bernstein, "Pragmatism, Pluralism, and the Healing of Wounds" (1997, pp. 385-389). Like the Callicott group and many others, Bernstein also recognizes the extensive variations in beliefs of Pragmatists, but he lists five "interrelated substantive themes that enable us to characterize the pragmatic *ethos"*: (1) Anti-Foundationalism; (2) Fallibilism; (3) The social meaning of the self; (4) Contingency; and (5) Pluralism (Bernstein, 1999). Brief characterizations of these themes, plus a perusal of Callicott's writings, will demonstrate both how far Callicott et.al. are from understanding pragmatism, and how they--and Callicott in his single-authored work--often boldly, but naively, challenge pragmatist viewpoints without understanding them.

(1) *Anti-Foundationalism*: Foundationalism, as pragmatists understand it—and as the term is used in modern and contemporary epistemology—is the view that, in order for humans to know anything, there must be some set of sentences that depend for their truth on no other sentences. Richard Fumerton, writing in the *Stanford Encyclopedia of Philosophy*, on line, describes the foundationalists thesis "in short is that all knowledge and justified belief rest ultimately on a foundation of noninferential knowledge or justified belief." Most contemporary epistemologists have recognized that such a view is inconsistent with a strict form of empiricism; they have also doubted the rationalists reasoning in favor of foundational knowledge. They recognize that much of human knowledge is obtained while making assumptions, what traditional philosophers of science call "background assumptions" which give meaning to scientific experiments and less traditional philosophers call a "paradigm". It is possible to evaluate the truth of some sentences while assuming others. Pragmatists reject the foundationalist claims that our knowledge, in order to be rationally justified, must rest on some premises not open to challenge by experience. Peirce, for example, sought to replace the epistemological analogy of a "foundation" with a "cable."

(2) *Fallibilism*: Pragmatists believe that every one of our beliefs is open to challenge, but Pragmatists do not embrace skepticism; they believe that "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, p. 287) Post-foundational

epistemologists have adopted an alternative view of justification: it is possible to evaluate the truth of claims while assuming some of our beliefs to be true, *provided each of those assumption in turn is open to challenge and correction in its own right.*

(3) *The Social Character of the Self.* Since all of our beliefs are considered fallible, we are always limited in perspective and yet knowledge creation proceeds. According to Pragmatists, truth must be pursued through a community of inquirers, and correction of beliefs is a social activity. Peirce said: "Logic is rooted in the social principle." (Peirce,) Further, since our thoughts are so thoroughly linguisticized, the language of a community shapes thoughts and the thoughts that are communicated.

(4) *Radical Contingency*. Pragmatists believe that the universe is wholly contingent, that there is chance in the universe, and that the world is encountered as risk and opportunity and it is up to humans and human communities to make sense of this contingent universe. While many empiricists have tried to stabilize beliefs by identifying linguistic forms as providing stability in the form of "analytic truths," this form of stability is elusive in itself, as living languages constantly change as they are used to communicate and cooperate. As the practices of communities change, their language changes as well. The categories which we divide the world into, which reflect our language, are ephemeral and constantly open to revision. Incomplete understanding of this Pragmatic theme causes Callicott , et. al. not to see how important language is to Pragmatists, and how thoroughly they reject necessary truths.

(5) *Pluralism:* Central to Pragmatism is the idea of "pluralism," which has two, related aspects. First, pluralism is advanced as a *description* of the world we encounter. In everyday life, as well as in philosophy, we encounter many different frameworks of understanding, individuals who espouse different views, and fields/sub-fields whose members develop different jargons and different starting points, facing us with a difficult task even to understand, much less to agree with, other philosophers, other acquaintances, and other cultures (Minteer and Manning, 1999). "What makes this task [of understanding] so difficult and unstable," says Bernstein (p. 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.'"

Associated with this pluralization of our experience in dealing with others is a second aspect, a serene acceptance of the plurality of worldviews and perspectives. Once one enters the pluralistic world of the Pragmatist, and recognizes that reduction of all points of view to a single, authoritative and certainly correct view of reality will never happen, one adopts a new, less argumentative attitude. This attitude accepts the complexity of the world, and the many conceptual and theoretical tools humans have created to understand that complex world, and seeks cross-perspectival understanding, believing that it is reasonable to expect that one will learn something from alternative points of view, even ones one finds initially foreign or even abhorrent. As Bernstein says: "Here one begins with the assumption that the other has something to say to us and to contribute to our understanding" (p 399).

Callicott sees the world from the viewpoint of a strongly committed monist, and he explicitly rejects Pragmatists' powerful arguments for contingency, fallibilism and anti-foundationalism in his single-authored works, so it is not surprising that Callicott, et.al. find it difficult to comprehend the Pragmatist tradition. Callicott, for example, strongly endorses foundationalism (1999, p. 507). It is unclear in what sense Callicott understands foundationalism in that, if we take him to be endorsing foundationalism as defined by epistemologists, his position is apparently inconsistent with his claim that neither he nor any other environmental philosophers endorse a priori knowledge. Foundational knowledge *is* a priori in that the foundations must be undisputable.

Before proceeding to discuss how these ideas were embodied in Leopold's early philosophy of management, one point needs clarification. Callicott, et. al. protest that I seem to offer only two epistemological options, and then describes two options, one of which they characterize as 'a priori' ethics and the other as, "Hadley's definition." He then protests: "An epistemological mean lies between (a) the Cartesian extreme of *a priori*, self-evident truth and (b) the putatively Pragmatic extreme of a good guiding metaphor whose 'truth' is determined by the practical success of behavior guided by it. The mean between these two extremes is the epistemology of science." (p. 471) To Callicott, et.al., then, I am simply confused by insisting on the method of experience and using it to criticize a priori elements in his and other environmental philosophies. They say, "No one, as far as we are aware, has ever asserted that [a nonanthropocentric ethic

is] true *a priori*, nor certainly, that Leopold himself ever thought so." (p. 470) I am in agreement regarding Leopold,--that's my point when I attribute a full-blown experience-based epistemology to him. With respect to contemporary environmental ethicists, however, I disagree.

Of course it is true, that there is a great deal of room between the two horns of the dilemma they falsely attribute to me,[iv] but Callicott misunderstands the Pragmatist position. Within that middle ground one can identify degrees to which various empiricist philosophies have taken to heart the idea of radical empiricism and radical contingency. The first step toward empiricism is to accept that all substantive knowledge about the world (non-tautologous sentences, what Kant called "synthetic" judgments) is to be expressed in sentences that are empirically falsifiable. At this first step, it is still accepted that tautologies are certain because they will be true in all possible worlds, and hence empiricists at this step still have a concept of necessity and, by implication, a cache of sentences that can be considered true, come what may, and these sentences can be taken as true, or given, and to some extent, at least, as immune to criticism. Indeed, this was the semi-stable position empiricists had been moving toward since Hume's distinction between "matters of fact" and "relations of ideas", (Hume, 1748, Section IV, Part 1) and it found a stable, if controversial home in the philosophy of logical empiricism. At last it seemed that empiricists had made their peace with necessity; necessity resides in our belief system in the form of meaning relationships which, in turn, rest on "rules of language."

Willard Van Orman Quine, however, discomfited this apparent stability by noting that the rules of language can change, and in living languages they often change because of new and unexpected observations; there is no sharp distinction between changing a belief and changing a rule of language; both are attempts to make our belief system, based on stored observations, current with incoming stimuli (Quine, 1953). On the Quinean view, which of course was inspired by James and Peirce, since all necessity is *de dicto*, not *de re*, it follows that tautologies are only as stable as the language in which they are expressed. They are not labels for "natural kinds," unified by timeless "essences," nor do they offer necessity in Kant's classical sense of universality. In ordinary discourse, especially over time, not just the labels of categories change,

linguistic creativity—following human endeavors to communicate in ever-changing situations—reshuffles membership in the categories. Helpful categories and terms come to the fore, terms that have no use in communicating important or interesting insights gradually disappear.

Pragmatists had anticipated Quine's idea of radical contingency and they recognized that this deep form of contingency, based in the evolution of language in the face of new tasks and new situations, and implied that language is a dynamic, adaptive tool, rather than a system of labels applied to categories arranged in nature according to essences.[v] Callicott, et. al., not fully understanding the profundity of the Pragmatists' understanding of contingency, including contingency of language, deny they or any other environmental ethicists support their views on a priori grounds. This is a claim that must be examined.

As an example, let us consider some of the assertions of Callicott himself, both in the present article and in prior work. Are there any 'a priori' elements in Callicott's environmental philosophy? Let us take the following sentences: "In the literature of academic environmental philosophy and ethics—which emerged…in the mid-1970s—values are classified dichotomously as (A) instrumental and (B) intrinsic. The value of something as a means to an end other than itself is instrumental. The value of something for itself, for its own sake, as an end in itself is intrinsic." (Minteer, 2009, p. 143) In another recent paper, Callicott makes a similar pronouncement, "We subjects value objects in one or both of at least two ways—instrumentally or intrinsically—between which there is no middle term" (Callicott, 2002, p. 16). While one cannot help but note the differing characterizations of the source of the distinction—in one case it is based on the esoteric language of a sub-specialty of ethics as discussed by a small group of professional philosophers, while in the second case the distinction is attributed to everyday linguistic usage—let us extract from the two sources a statement apparently implied by both:

S: Environmental values are of two types: instrumental or intrinsic."

What is the epistemological status of S? If we ask how we would determine whether S is true, it would appear that, in order to support S on on the basis of usage by environmental ethicists, we must first establish that the dichotomous theories of ethics

introduced and defended by environmental ethicists are “true” (Williams, 1985). Given that Pragmatist environmental ethicists deny that our values can be sharply separated as claimed in S, to simply rest the case for S on the linguistic practice of monistic nonanthropocentrists in the present context is simply question-begging.

The second explanation of why Callicott and colleagues believe S, on the other hand, rests on an account of everyday linguistic usage. While I cannot remember the last time I heard a non-philosopher or a person not influenced by philosophical jargon actually use this distinction, let us grant that ordinary speakers honor the distinction mentioned in S. That would provide as much support for S as noting that most people speak of the sun “rising” in the morning concluding that Copernicus is thereby refuted! If we search modern languages, it is not difficult to find vestiges of dualism, reference to “souls,” etc., even though scientific theory cannot countenance such. Basing claims of the way things are on the way people speak about them—treating S as an empirically supported statement—is clearly inadequate. Surely Callicott, et.al., do not intend to rest their whole philosophy of value on the shifting sands of dynamic linguistic usage.

Alternatively, perhaps the Callicottians believe S is an analytic sentence, true by virtue of the rules of language. This move would be consistent with declaring Callicott an empiricist who has taken the first step, recognizing that necessity does not exist in the world, but he is still seeking certainty in the rules of language. Here, he runs afoul of Quine’s Pragmatist argument that analytic truths are truths for specific languages, and that languages change as new empirical information becomes available, and as social relations and practices change. Callicott, et. al. can thus confidently support S on the basis of rules of linguistic usage only if they deny the conventional nature of language and hold language constant and unquestioned.

Have philosophers such as Callicott avoided a priori commitments? They have done so only by assuming a false empirical claim that language is fixed and implying that truths derived from the rules of language need not be questioned with regard to their continuing usefulness in emerging situations. While one might not classify such linguistically anchored rules as true “a priori,” they function like a priori rules that shape experience and control how one is allowed to speak about reality. One of Quine’s contributions was to cut through the various linguistic dichotomies between analytic vs.

synthetic, necessary vs. contingent, *a priori* vs. *a posteriori*, possible vs. impossible, and ask: are there sentences we will not give up under any pattern or accumulation of empirical evidence? In fact Callicott, referring casually to linguistic behavior of specialists and ordinary speakers as a basis for classifying all environmental values, has not and will not call his central distinction between intrinsic and instrumental value into question. There is, of course, obvious evidence that most people value nature in many and diverse ways, and that they describe these values in many vernaculars, and yet, for Callicott, the statement that there are two and only two ways to value nature lies beyond sincere doubt. In that sense, it functions as an a priori element in Callicott's incompletely empiricist position. In this sense, failing to appreciate the profundity of the Pragmatists argument for contingency and conventionalism of language, Callicott, et.al. rest their entire philosophy on an *a priori* basis, at least in the sense that it includes statements that are held to be above skeptical questioning .

I find it ironic that Callicott would accuse me of offering dichotomies, when his whole argument points toward reification of linguistic distinctions. He criticizes me as follows: "Norton seems to suggest that the epistemological alternatives for worldviews are starkly contrasting:

(a) we may regard a worldview, such as the evolutionary ecological worldview, to be 'self-evident, discovered '*a priori*, and 'independent of culture'; or (b) we may regard such a worldview to be true (or right) according to Hadley's definition—namely, that which prevails in the long run—because it enables the culture that believes in it to survive and flourish."

Callicott, et.al. fail to find Pragmatism in Leopold's thought because they are mistaken in characterizing Pragmatism and, especially, in characterizing the elements of Pragmatism that I think deeply influenced Leopold. This is evident in Callicott, et. al's repeated implications that someone who accepts the radical contingency of language automatically treats differences in linguistic usage as trivial and unimportant. (p. 461) For Pragmatists, this radical contingency is implied if one questions essentialism and Aristotelian "natural kinds") (Dewey, 1910). Callicott, et.al. thus attribute to Pragmatism a negative view of the importance of language, when in fact pragmatists touted language as an adaptation of great importance for survival. For true Pragmatists,

who reject all forms of essentialism and belief in natural kinds, the radical contingency of language means we can finally understand language as a tool of the understanding, to be used and tested in different situations. One expects language to be at the heart of our belief structure, our reasoning, and our orientation to the world. Their point—once having given up the ideational and the referential theories of meaning and the "logical truths" of scholasticism, having located meaning in social interactions, language and logic become tools that shape our world and make it manageable. Apparently, none of the sextet of critics has heard of "semiotics" or the "Pragmatics of language".

The Callicottians' cluelessness about Pragmatism is perhaps most obvious in their dogged emphasis on Leopold's use of "truth" as the subject of Hadley's definition of "right." My suggestion that, for Pragmatists, the line between "truth" and "right action" is sufficiently faint that it was unsurprising that Leopold made this substitution of "truth" for "right" in the otherwise direct quotation (in 1923), is based on the Pragmatist view of language. This view of language is based on Bernstein's 4th attribute: "contingency." If one looks more deeply at this contingency as applied to language, according to the Pragmatists, one finds an intimate relationship between *knowledge, action, and community*. Indeed, knowledge is tested and shaped by communal action, rather than by the existence of a mechanical, predictable world that causes our perceptions and "corresponds" to our assertions. This Pragmatist point, later discussed by Wittgenstein in his discussion of *language games* and *forms of life* (Wittgenstein, 1953,), suggests that cultures living in different environments will evolve different linguistic and conceptual tools. Their knowledge of their environment, and their ability to act and survive in that environment, are so intertwined that having the truth allows right action and acting rightly is a sign of having the truth. Once one becomes comfortable with Pragmatists' understanding of knowledge as integral to action—and with their suspicions of the fact-value dichotomy more generally—then one might say, for example, that members of a culture have found the "truth" about their land and habitat if they have developed a set of practices that allow them (and their practices) to evolve and survive in the environment they have made their "place." Speaking informally, the test of truth is action in a specific situation, and acting in a specific situation gives meaning to the truths we articulate.

Part 2B: Leopold's Pragmatism

I hope I have now laid to rest the idea that Leopold resisted the idea that language is conventional and that he embraced a belief in metaphysics as pre-determining the meanings of words. His obvious awareness of this idea is sprinkled throughout the final section of *Some Fundamentals*, and even Callicott, et.al. recognize at least 5 references to the vagaries/contingencies of language in the final three pages of the text. Leopold relied upon this conventionalism as he compared different worldviews from Ezekiel, to Ouspensky, to Muir, to the anthropocentric theists and the anthropocentric resource scientists. He saw these as alternative perspectives, each of which has its own language that highlights insights, but also suffers from weaknesses and inappropriate implications. Because he accepted the conventional nature of language, and recognized how languages adopted by "managers" shape their behavior, he appreciated both the power—and the lability--of ways of talking. He saw, also, that the ultimate test of a set of conventions, linguistically and institutionally shaped, is the success of the set of behaviors of the culture that lives in a place through a language.

Second, the key breakthrough point that Leopold took from Hadley and the Pragmatists was the recognition that, once one rejects foundationalism and essentialism and embraces the contingency of language, the only basis human beings have to learn, whether in science or in ethics, is from *experience*. The experience in question, however, is not individual "Cartesian" or "Lockean" experience, it is not understood as chopped up into atomistic "images" which somehow "picture" reality, floating in spaceless consciousness: it is "social experience" (Bernstein's theme # 3). Unlike Locke, Hume, and Callicott, who understand the senses as gateways for fragmentary images and impressions in the private minds of individuals, Pragmatists rely on a more action-oriented understanding of communal experience in cooperation as active experimentation in the face of felt problems. By discussing the success and failure of cultures, Leopold follows Hadley and other Pragmatists in embracing the community level as the location at which truth and falsity are adjudicated, as individual actions and the meanings of those actions are inseparable from the stories themselves. Hadley and Leopold, that is, were adopting a Darwinian idea analogically and loosely, saying that, given the social nature of "logic," every culture can be understood as an experiment in living in a place. And the longevity of such experiments are a test both of the actions taken and the beliefs and

explanations associated by the culture with those actions.

This is the central idea that I think Leopold adopted; that experience is the ultimate arbiter of truth *and* right; the method of experience. While it is often called the "scientific" method, for Pragmatists, it applies to morals no less than to scientific hypotheses. A process analogous to individual selection as it occurs in nonsocial animals also occurs within cultures; cultures will survive if their practices are adaptive to their place, otherwise, they will not survive. This is the Darwinian test, invoked in the reference to Hadley's definition of "truth" in *Some Fundamentals*.

Leopold and Hadley both used Hadley's definition/criterion as a shorthand to express an extension of Darwinism to cultures; and since behavior, not ideology, is what determines survival, the motto is a brief way of endorsing the crucial role of "experience"—being put to the test by a changing and sometimes hostile environment in the place the culture inhabits *is* the test of survival. The complex of linguistic forms and acts, the culture, and the practices intertwined with the language, are ultimately tested by success of the "experimenters" not by comparison to a pre-linguistic world. (Dewey, Reconstruction). 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 theorizing 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, p. 211)

We also see Leopold's Pragmatism in his pluralism—a manifestation that may be hidden to anyone who insists on reading Leopold as a monist who thought he had found—or would ever find—the true "metaphysical foundations" of the land ethic. Pluralism both permeates and shapes Leopold's discussion in the final part of the 1923 paper. The most obvious of these passages comes at the end of Leopold's discussion of Ouspensky and organicism; after exhibiting obvious interest and respect for this position, Leopold 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." (1923, p. 139) This is as clear an expression of William James's idea of living in a "pluriverse" as one is likely to find (James, 1909), and its expression of the Pragmatist idea of contingency is made even more obvious given Leopold's repeated cautions about the contingency and ambiguity of language.

My reference to James, here, is deserving of further comment. Callicott, et. al., seem to think that I am claiming that Hadley was the only source of Pragmatist ideas that might have influenced Leopold while he was in New Haven. This is highly unlikely, given the historical context. In the first decade of the 20th century, Pragmatism was sweeping through New England's social and intellectual life and, especially, creating a new voice in philosophy departments in the intellectual centers. By 1909, when Leopold left New Haven, Pragmatism had a strong foothold in Burlington, VT, the University of Chicago, and the University of Michigan. It is implausible to think that these ideas had not penetrated to New Haven, and Leopold would have certainly encountered this new "Darwinian" philosophy, applied to truth/epistemology, to right action, and to social and political issues. As Piers Stephens has pointed out to me (personal communication), there are passages in which Leopold sounds very Jamesian, including one passage where he apparently borrows an analogy from James; we know, from Meine (1988, p. 160) that Leopold and his wife Estella read and discussed philosophy readings that included James.[vi] While other exposures to Pragmatist ideas may be unprovable at this point, given the intellectual climate of the times, Leopold could have picked up ideas from many possible conduits. Leopold saw Hadley's definition as a particularly trenchant statement of the experiential criterion of truth and right, signaling the Darwinian ideas of Pragmatists.

The suggestion that Leopold was influenced by, and worked closely with pragmatists is not mere speculation. Developing the idea of a "third way", a non-utilitarian intellectual core of leaders who were unquestionably "progressives," but who rejected economic reductionism and economic determinism, Ben Minteer has provided the intellectual and cultural history to show that Leopold was one of a number of "second-generation" conservationists. These conservationists, influenced by Dewey and other pragmatists, conceived of their task as, first of all to criticize economic

utilitarianism, and second to create a strong form of "civic environmentalism" that focused on building conservation character and on identifying an emergent public interest. In Leopold's case, this involved developing, as a core idea, the goal of identifying and serving "the public interest," and incorporating this idea into his later, expansive idea of "land health" (Minteer, 2006). This intellectual history supports the view that Leopold's thought was integrated into the broader, third-way approach of intellectual leaders who broke decidedly from Pinchot, rejecting economic utilitarianism and rapid economic growth, and embracing a pragmatist-inspired goal of seeking the public good through civic conservation. This view of Leopold, as engaged, inquisitive, interactive, and civic minded fits what we know of Leopold far more than would a view that sees him as a loner and an out-lier who dismisses his friends and associates views as "ridiculous" and "preposterous."

Leopold's use of Hadley's definition, unfootnoted and no doubt quoted from memory, was Leopold's way of embracing Darwinian natural selection as the ultimate test of truth. If an individual can survive, this implies it is "adapted" to its environment; if a species survives, this means that a breeding population of that species contains genes that allow survival in the environment they evolve within; the final step, endorsed by Hadley and Leopold, is to apply this Darwinian idea (analogically) at the level of cultures: a culture that has adapted to an environment, including its extremes of flood and drought, will be marked in that culture's survival over multiple generations. This key idea of Pragmatism, then, that experience provides the only epistemological test of both truth and right, remained constant for Leopold from 1923 until his death.

Part 2C: Rescuing Leopold (and Norton) from Callicott's Misattributions

In this Part. I will show that Callicott's interpretation of my attribution of Pragmatist influences on Leopold is based on a confusion. Callicott fails to separate Hadley's Darwinist criterion of truth and right from Hadley's cheerleading for capitalism, and his insensitivity to issues we would today refer to as "imperialistic." In fact, I will show that Leopold (following a hint from Hadley), used Hadley's definition/criterion *against* Hadley's capitalistic ideals, reversing Hadley's argument for capitalism.

If one accepts the obvious evidence of a pluralistic viewpoint in Leopold's work, pluralism based in the contingency of language, then one can read the 1923 essay very

differently than Callicott, et.al. do. Callicott and company apparently failed to note my clear statement that Leopold in fact turned Hadley's definition back upon the pro-Capitalist ideology that Hadley endorsed. 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 (quoted in Norton, 2005, p. 68) "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."

I explicitly showed how Leopold used Hadley's definition and associated criterion, *independently* of Hadley's capitalism, but in fact to *call those very ideas into question*. He doubted Hadley's praise of capitalism because Hadley had not, as Leopold had, seen how capitalism and European grazing culture failed to respect the limitations inherent in the arid land of the Southwest. I say: " Leopold based his arguments on his own experience, and in this case he concluded that the institutions and managerial practices of European culture were not well adapted to the arid, local landscapes" (Norton, 2005, p. 69). Thus he reversed Hadley's judgment, which is just what Hadley apparently encouraged in his warning against finding 'truth' in societies based on a too-short period of evaluation. Leopold, after looking at the evidence regarding the current status of resource systems in the Southwest, concluded that rapid economic expansion and high levels of exploitation of the fragile lands under his control represented an example of what Hadley had referred to when he cautioned that it is possible for a culture to consider itself about to 'win the race' even "when it is riding most hurriedly toward its downfall."

We can now see that much of Callicott-and-company's detailed argumentation, to the effect that Hadley had many beliefs Leopold apparently rejected is simply irrelevant to the issue of the role he gave that definition in his argument in 1923. I never said, for example, that Leopold accepted Hadley's pro-capitalist leanings or his implication that the Darwinian test would favor capitalist political economy. What I said was that Leopold adopted a Darwinian "model" for deciding questions of who, and under what circumstances, a culture can claim to have the truth/right. Hadley's criterion/definition

provided Leopold with a basis for criticizing the damage land management of his time had done in only a little over a generation. Using this criterion/definition to cut through ideology and focus on practice did not, however, entail also adopting Hadley's capitalistic and imperialistic views. Given that I never said Leopold endorsed the ideas Callicott and company call "brutal," and "jingoistic," I can significantly narrow the defense of my case that Leopold was deeply influenced by the Pragmatist Hadley's employment of a specific "model" for deciding questions that once lurked in the undecidable area of thought called "ideology."[vii]

Part 3: The Organization and the import of "Conservation as a Moral Issue," the Final Section of "Some Fundamentals" (1923)

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* and, more specifically, the internal argumentative structure of its concluding section, "Conservation as a Moral Issue." I contend that their reading of this passage fails to identify a coherent argument; instead, thy treat the concluding section as severed from the general argument of the paper and, especially, they fail to exhibit the internal structure of Leopold's argument in the concluding section of the essay. In this Part, I show that the three pages of that final essay comprise a coherent argument, an argument that Callicott, et.al. miss because they ignore the "signposts" that outline the general thrust of Leopold's argument.

Callicott, et. al.'s errors, however, begin with their broader failure to read the concluding section as an appropriate conclusion to the broader argument of the entire essay, "*Some Fundamentals*." This essay was a summary of what Leopold had learned by applying his perhaps unmatched observational abilities and associated tenacity in keeping a written record of changes he observed in the land. The paper was, in effect, a summary of his assessment, based on "horseback reconnaissance" of the various natural systems of the Southwest and of the impacts of the policies he, other governmental land managers, and private landowners were having on that land. The concluding section 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. The paper "graded" management of the federal forest lands of

the Southwest and concluded that current management was not protecting important resources such as grasslands and watercourses. Recognizing this, we should read the concluding section of the essay as a systematic search for a moral system that provides a critique of actions that, taken for short-term economic gain, can be seen, empirically, to lead to degradation of land.

Having first recognized that "Conservation as a Moral Issue" is the conclusion of a larger discussion, it is now possible to see the final section as functioning on two levels. On one level, it provides a "survey" of possible ethics 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 despite the many ways in which it creates deep ironies for human beings and human managers, can provide an ethic that is sufficient to guide us toward better policies. One need not, on this approach to the essay and to the section, see Leopold as adopting a single ethic and criticizing or ridiculing all alternatives. One can see him, alternatively, 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.

Yet another irony in the Callicottians' attack on my interpretation of Leopold is that they suggest (p. 470) that *I* treated Leopold as dogmatic. On Callicott, et. al's interpretation, however, Leopold is taken to rejecting anthropocentrism as "so ridiculous that it should not be dignified by dispute" and "preposterous." Leopold, on this view, faced with the fact that all of his scientific colleagues, and all of the religious people he knew, believed fervently that the earth was made for humans, and yet he would not dignify their beliefs with even a counter-argument? Is it plausible that, even if Leopold did also (a separate question) reject Hadley's criterion in 1923 as Callicott says, that he would call out the name of his college president in order to denounce his ideas as "ridiculous"? As Callicott, et. al., emphasizes, Leopold was not a militaristic, confrontational type of person, and I agree that he would never have followed Hadley into the imperialism Callicott, et.al. try to associate with my interpretation. On Callicott, et.al's interpretation of Leopold's failure to dispute the point—as a dismissal of the serious beliefs and commitments of everyone he knew—Leopold would be a dogmatic, dictatorial, non-cooperative person, and calls out individuals he once respected for

ridicule. In other words, a Leopold who dismisses his friends' deepest beliefs as "preposterous, and ridicules people he once revered, all implications of the callicottian's interpretation of Leopold's reference to Hadley, wouldn't be Leopold.

The first step in responding directly to Callicott, et.al.'s interpretation of "Conservation as a Moral Issue," is of course to respond to their rather curious point, a point that Callicott has raised on many occasions, and once again with others in the paper under discussion here, that Leopold is engaged in irony. What is surprising is that Callicott somehow thinks this acknowledgement settles the issue about what Leopold meant in referring to Hadley's definition. I agree that there is irony involved in this section; I will show, however, that if one recognizes the true structure of Leopold's argument, 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.

Callicott, et.al. think the attribution of irony to Leopold settles the issue of interpretation because they believe that, if a sentence is intended ironically, or used ironically, this implies or leads us to expect that the speaker of that sentence believes the sentence to be false. He says, "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"!)' (Callicott, et. al., p. 465) But there is no reason to think that this sentence, while part of a clearly ironic passage, was thought by Leopold to be false. To take an analogy, on Callicott's understanding of irony, the following sentence would be confused or at least highly anomalous: "Ironically, Pro-Life advocates who oppose birth control and sex education actually increase the prevalence of abortions." Whether this sentence is actually true or not, when I hear a Pro-Choice advocate utter this sentence, I hardly question that they think the sentence is true and, being true, expresses an irony. 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 or at least likely to be 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 begin by challenging the implied 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 definition of "irony" as "the use of words to express something other than and especially the opposite of the literal meaning" (p.). But this is not the appropriate definition for the case at hand. The second definition offered in Webster's Unabridged is the appropriate one: "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. What Hadley's definition contributes to the irony is that (since Darwin) we know that what counts is not their ideology but their "experience"—their practices which determine how long they survive. According to Darwin, and Hadley's "happy" definition, their claimed "nobility" is tested in their longevity, not in their ideology.

In what follows, I will alternate between attributions and discussion of what Leopold said as one moves through the passages, which are set in normal type, with meta-comments (*in italics*) showing how these elements of Leopold's thinking actually formed a tight and carefully reasoned argument.

The first "signpost" is the transition into the final section where Leopold acknowledges his preceding "data" based on his "reconnaissance" missions in the Southwest territories considers conservation "merely as an economic issue." He immediately argues that, while he has found adequate economic reasons to criticize current practice in prior Sections, he will now consider "its moral aspects." This signpost makes clear that the moral discussion to follow is clearly motivated by his assessment of resource use earlier in the essay.

Starting with this orientation of the final section as a culmination of the "accounting" system Leopold had used in evaluating long-term impacts of the management of grazing, we see that Leopold is searching for an ethic that will be applicable to his observations. In this context, and given Leopold's emphasis on grazing

lands and trout streams in the early, empirical sections of the paper, Leopold poses the question: What normative/moral ideas are there that could be enlisted as moral resources to support and guide a conservation morality?

Leopold considers several candidates:

1) Ezekiel's admonition to protect waters and pastures, with several possible justifications mentioned by Leopold:

a) a matter of self-respect

b) as a matter of "craft"

c) a broader "concept—that "the privilege of possessing the earth entails the responsibility of passing it on, the better for our use, not only to immediate posterity, but to the Unknown Future." (1923, p. 139) Note the strong emphasis on concerns about the future, and

d) the soil is respected as one respects a living thing.

I read this reference as essentially introductory, acknowledging the importance and longstanding respect for productive land, but suggesting a range of more specific explications of this "responsibility. So he uses Ezekiel to suggest that there is a range of possible ethics, or interpretations, possible. Interpretation 1d leads Leopold to explore organicism as the first candidate to be examined as a basis for conservation morality.

2) Ouspensky's organicism: Leopold next notes that if we can follow Ouspensky in seeing the earth as a whole, living through slow changes, we might perceive not only organs with coordinated functions, "but possibly also that process of consumption and replacement which in biology we call the metabolism, or growth" (p. 139). Leopold clearly finds this idea inspiring, and concludes that it would provide "one reason why we can not destroy the earth with moral impunity; namely, that the 'dead' earth is an organism possessing a certain kind and degree of life, which we intuitively respect as such. (p. 140). Note that he refers to this as "one reason," not "the" reason as he would if he is searching for the one correct ethic.

Leopold's viewpoint on the discussion of organicism, and its place in the argument, are revealed in two "meta-comments", one embedded in the discussion of organicism, and one coming directly at its end. First, within the discussion, Leopold notes (as quoted above) that "There is not much discrepancy, except in language,

between this conception of a living earth," and the earth as studied by natural scientists. I take this to be a straightforward recognition that, useful as they may be, these different "languages" represent different perspectives or accounts of the world, and that it is not given to us to know which of these accounts (independent of the languages we use) is to be given absolute priority. Leopold's point is not to belittle the difference indicated by languages, but to recognize how different languages signal underlying differences in perspectives and insights.

Second, immediately after positively discussing the possible obligation we have to treat the earth well because it is a living thing, Leopold introduces another, more practical consideration: "Possibly, to most men of affairs, this reason is too intangible to either accept or reject as a guide to human conduct" (p. 140). This comment speaks not to the truth *of organicism, but rather to its* efficacy in convincing policy makers*. Both the internal and the external comments make perfect sense if we assume Leopold is examining several moral bases as possible supports for a conservation morality, and considering strengths and weaknesses of each. Undaunted in his quest for a possibly effective moral basis for conservation, Leopold goes on to discuss:*

3) Muir and rights of rattlesnakes. Leopold next considers a stronger version of nonanthropocentrism, one due to John Muir, that challenges "the great human impertinence" that claims the earth is solely for human use and enjoyment and asserts the rights of other species against humans (p. 140).

Here, Leopold's argument here is rather dense and a bit confusing. Just as with organicism, Leopold clearly recognizes the inspirational nature of Muir's views and he also agrees that anthropocentrism and human arrogance is unjustified and impertinent. He mixes this discussion of an idea he finds attractive with a recognition that the idea evokes deep ironies, but he also realizes that anthropocentrism is, and will remain for the foreseeable future, the dominant idea, accepted by the major religions of the world, and by the practical, resource scientist and managers--the "Men of affairs" Leopold worked with.

At this point—the crucial point in the argument of the section—Leopold makes a bold move: "Since most of mankind today profess either one of the [anthropocentric'] religions or the scientific school of thought which is likewise [anthropocentric], I will not

dispute the point." P. 140. The key passage here, where Leopold declines to dispute anthropocentrism, is crucial to the interpretive debate discussed in this paper. Did Leopold decide not to dispute it because he had already rejected it, as Callicott et.al. claim? Or, did he decide not to dispute it because, as a pluralist, he didn't have to? He could simply incorporate it as one moral concept or tool among others. Callicott, et.al. insist that Leopold decided not to dispute anthropocentrism because he thought that anthropocentrism was "so ridiculous that it should not be dignified by dispute," (P. 463) but this interpretation is inconsistent with what is implied by the syntax of Leopold's sentence: Leopold says, "Since most of mankind today..., I will not dispute the point." If he were rejecting anthropocentrism out of hand as ridiculous, he would have referred to evidence for its falsity; accepting it "since" others do is thus to accept it as a working principle, despite its unattractive aspects, not to reject it as obviously false. The pluralist Leopold, considering the strengths and weaknesses of several conservation moralities, recognizes the attractiveness of a nonanthropocentric position, especially to Darwinians like himself, but also considers the usefulness of ideas in achieving productive discourse and cooperative action, and so he expects to use anthropocentrism most of the time.

Leopold, admittedly bothered by the arrogance of anthropocentrism, slips in one more barb against scientists, as he says to them: "it is just barely possible that God himself likes to hear birds sing and see flowers grow." But then he immediately returns to the theme of concern for the future: "Granting that the earth is for man—there is still a question: what man?" (p. 141). And it is at this point that Leopold introduces a comparative argument about the adaptations of the various cultures that had inhabited the Southwest, which he lists as "the cliff dwellers," "the Pueblos", the "Spaniards", and then the "Americans". Of the cultures that preceded the American attempt, Leopold says, they "have flourished here," and we may "truthfully say of our four [sic?] predecessors that they left the earth alive, undamaged." To Leopold—fresh from his critique of current land management in the Southwest—Hadley's definition, "Truth is that which prevails in the long run," allows a comparison. The current grazing culture cannot stand up to the test of many generations, and hence the Americans were proving they did not have as much "truth" as prior, indigenous cultures that had adapted gradually and survived hundred-year storms and hundred-year droughts.

This line of reasoning occurs right in the midst of Leopold's development of reasons why anthropocentrists, if they are "logically [anthropocentric],"would correct currently damaging practices. If there is "indeed, a special nobility inherent in the human race—a special cosmic value, distinctive from and superior to all other life—by what token will it be manifest?" Leopold answers his own rhetorical question with another question posing a dilemma: "by a society decently respectful of its own and all other life, capable of inhabiting the earth without defiling it?" or choosing the fate of the self-exterminating potato bug? (p. 141) If Leopold were writing today, he would no doubt have referred to the obviously preferable first choice as "living sustainably," and this interpretation shows how Hadley's application of Darwinism to cultures allowed Leopold to show that, even if he grants anthropocentrism, he has a powerful, intertemporal ethic that will support his arguments for changed policies and for rejection of Pinchot's economically driven, rapid-development-oriented management efforts, whether or not he finds support for emerging ideas like organicism or rights of other species.

As a pluralist, Leopold did not have to win the argument against anthropocentrism because he thought both anthropocentrism—especially long-sighted anthropocentrism—and nonanthropocentrism offer insights. More importantly, he thought that very similar policies are good for humans and for protecting nonhuman species. In the case in point, protecting grasslands and recovering watercourses is good for humans and good for wildlife. Strategically, his faith in the convergence of human and nonhuman interests allowed Leopold to play it either way, depending on his audience and his purposes.

On my interpretation, however, the truth *of Hadley's definition is also essential to Leopold's argument because it provides him with an effective comparison between the current, failing management of the lands of the Southwest and prior, indigenous cultures that had developed their practices over many generations and were able to survive and adapt. The moral of the story is: unless land managers in the Southwest shape up, and perhaps learn some of the "truths" of long-lasting indigenous cultures, they will indeed "be judged in 'the derisive silence of eternity.'" In this light, it is possible to see that the definition—an invocation of a Darwinian model of cultural selection, is both ironic, and*

taken to express a profound truth. It puts the claims of all anthropocentric cultures to the test of adaptability, showing that ideological claims ring hollow if the culture cannot survive.

If Leopold is understood as a pluralist, the key passage in which Leopold decides not to contest anthropocentrism does not signal a rejection of anthropocentrism in favor of nonanthropocentrism. Rather, it recognizes that some ideas, like organicism and rights for rattlesnakes, are important: they represent one valid way to understand the world. If, however, we hope to build a conservation morality that has some hope of unifying humans behind a single philosophy of conservation, that philosophy would have to embrace anthropocentrism as the fulcrum point of a management ethic".

Anthropocenrism has, despite its weakness, also a key strength that—if one can strip away the misuses—makes it eminently useful: it posits that humans are the most "noble" of creatures. In the remainder of the essay, the last two paragraphs, Leopold explains how, despite its arrogant tendencies deserving of irony, a proper understanding of the anthropocentric morality of protection of resources for posterity will be sufficient to correct management mistakes and repair the systems which bad management had damaged and threatened (provided humans claiming nobility act consistently with their claimed pedigree). In the end, then, Leopold does not mock, but endorses with respect claims of human nobility: In "A Monument to a Pigeon," Leopold (1949) recognized both the irony and the truth of that claim, recognizing with Darwin our "kinship" with other species, Leopold says "We, who have lost our pigeons, mourn the loss. Had the funeral been ours, the pigeons would hardly have mourned us. In this fact, rather than in Mr. Dupont's nylons or Mr. Vannevar Bush's bombs, lies objective evidence of our superiority over the beasts."[viii]

4. "Noble" Anthropocentrism. After having decided not to dispute anthropocentrism, Leopold shifts into a much more positive mode of argument. Meeting the anthropocentrists on their own ground, Leopold notes that, inherent in the anthropocentric position is a belief in the special nobility of humans. If anthropocentrists are "logically [anthropocentric] (meaning they actually live up to their arrogant claims), then they will protect resources for the future and be respectful of other life forms. Leopold, in these last two paragraphs—the location of the much-disputed quotation from

Hadley—shows that an anthropocentric philosophy demands living sustainably and that this sustainability, based in an obligation to posterity, will also support protection of other species as the birthright of future generations.

In this Part I have shown that Leopold developed an argument in an open-minded, pluralistic mood; he considered several conservation moralities and seems to end up with a broadly anthropocentric approach, despite the inspirational attraction of organicism, Muir's nonanthropocentrism, and despite the ironies involved in the ideology of anthropcentrism. Callicott, et. al. are correct to see irony in anthropocentrism if it foolishly claims that God made the flowers and birds for us alone, and in the belief of each culture that lived there that the earth is made for them, but that they have passed away despite their culture-centered ideology, and the earth survived without them. These ironies, however, work as literary filigree embellishing the central argument: whatever ideology or metaphysics a people of a culture believe, Leopold would put his faith in experience, the success and failure of the practices in which a culture engages. "Truth is that which prevails in the long run."

Part 4: Keeping Score: Counting and Explaining away Passages in Defense of Orthodoxy

Callicott et.al. make a lot of the existence and the timing of several occasions on which Leopold mentioned Hadley and quoted Hadley's definition. Because they have so totally missed the intention of Leopold's discussion in "Conservation as a Moral Issue," they get all tangled up in a hopelessly implausible attempt to explain away Leopold's use of the definition. They admit that the first reference to Hadley, in a 1918 lecture to the Garden Club was clearly endorsing Hadley's view, but they argue that, of the three remaining references to Hadley, one is ambiguous, one clearly involves rejecting Hadley's views, while ridiculing Hadley (the one we are considering in *Some Fundamentals),* and the fourth, which was the last reference, *after* having ridiculed the idea a year earlier, is "enigmatic."

The first reference, from the Garden Club speech, in which he introduces Hadley's idea as the great idea of his time, Leopold says: "When an idea has been tried by fire and adopted, it is known as the Truth. So firmly has this evolutionary character of Truth has been established that one of the modern philosophers—President Hadley of

Yale—now defines the truth as that which "prevails in the long run." (Quoted in Norton, 205, p. 66). Even given his mission to deny Leopold embraced this idea, Callicott et. al. cannot deny that this 1918 passage is respectful of Hadley's definition and even reverent in his reference to Hadley. Then the gyrations begin. They next discuss a 1921 reference and, with very slim evidence that Leopold *may* have been using irony, calls this one too ambiguous to classify.

With these two references as background, Callicott, et. al., amazingly then argue that by 1923, Leopold had not only rejected Hadley's definition, but had also come to see it as false, ridiculous and dangerous. So far, then, after three citations, we have at best a tie from their point of view, *even if we grant Callicott, et.al.'s interpretation of the contested controversy about how to interpret "Some Fundamentals"*. Then we see that Callicott et. al. can only maintain this question-begging tie by finding reason to treat the subsequent reference, in 1924/5 as "enigmatic". How likely, however, is it that Leopold—or any author--would choose a statement which he takes to be false, and ridiculously so, as the epigram for an essay? Not likely, at least, not unless the author sets out in the paper to correct the error so highlighted—and there is no claim that Leopold denied or even qualified his epigram in the essay.

All that Callicott et.al. provide is an attempt to conextualize away the second and fourth citations by noting they were written in contexts where Leopold was concerned about conflict. Once one recognizes, as shown above, that the ideas Leopold borrowed from Hadley are independent of Hadley's ideas about militaristic conflicts, then these contextual connections are simple coincidences. So Callicott and colleagues are left with little basis for claiming the second and fourth references to Hadley are "ambiguous" or "enigmatic" and even if they are, and are not counted, Callicott, et.al., are left only with their repeated claims that Leopold's 1923 ridicule of Hadley's definition is "obvious". So, on this shaky basis, we are asked to believe that Leopold shifted his view of Hadley,s definition one hundred and eighty degrees from 1918 to 1923, but that he backslid in 1924, giving it the honored place of an epigram.

Callicott, et. al. also make a case that Hadley actually should be considered an "economist" and that he did not show any interest in Darwinian epistemology before 1908, only one year before Leopold left Yale in 1909, implying that Leopold would have

had few chances to be exposed to Hadley's political epistemology. But this bit of speculation is clearly mistaken, since the book, Some Influences in Modern Philosophic Thought (1913), (based on McNair lectures delivered in 1912) includes as an Appendix, a paper ("The Influence of Charles Darwin of Historical and Political Science,") published in The Psychological Review *in May, 1909*! Most of my quotations from Hadley in my published work are taken from this Appendix. To believe that Hadley had only acquired an interest in Darwinian epistemology in 1908, one would have to believe that he developed this interest sometime in 1908 and that he proceeded from the first inkling of an interest in a complex subject to publication in an important journal within just months—highly unlikely for a sitting college president. So, whenever Hadley started thinking about and writing about Darwin and truth/right, it clearly was before 1908, and Leopold could easily have been exposed to these ideas as Hadley was developing them, probably throughout Leopold's stay in New Haven.

Part 6: Conclusion: What the Dualists Miss in Leopold's Contribution

I believe Leopold was deeply influenced by Pragmatism; Callicott and his nonanthropocentric followers think he wasn't. What exactly is at stake? This amounts to asking: in what ways does a nonPragmatist interpretation of Leopold as a monistic non-anthropocentrist underestimate the contributions Leopold can make to our understanding and solution of environmental problems? While a full answer to these questions would require more space than is available here, I will conclude this paper by mentioning three ways in which the Callicott, et. al. interpretation of "Some Fundamentals" and, especially, their failure to see how Pragmatism allowed Leopold to integrate science from multiple fields and resources with a new, more pluralistic, multi-scalar, and adaptive approach to environmental policy.

1. Because they understand Leopold's discussion of moral bases for conservation as a question of deciding between two possible ways of valuing nature, and because they see "Conservation as a Moral Issue" as describing a struggle between two theories of ethics, both of which cannot be true, on Callicott, et. al.'s interpretation, Leopold faces an irreconcilable conflict between Pinchot and Muir about the nature of environmental values. Then, sometime between 1920 and 1935, according to this monistic account, Leopold rejected his early commitment to Pinchot's humanistic utilitarianism, and

adopted a full-fledged non-anthropocentric ethic that sharply distinguishes environmental values into instrumental and intrinsic values and privileges the intrinsic values of nature over the use-values humans derive from natural systems. While Callicott sometimes notes that some objects can be valued in both ways, he insists that in Leopold's post-transformation thought, intrinsic values in nature trump all instrumental uses.

Because monism leads Callicott, et. al. to see values dichotomously, and because they see the goals of serving human interests as sharply at odds with protecting nonanthropocentric values, Callicott and those bewitched by his dichotomous thinking think Leopold, in departing from Pinchot's Economistic utilitarianism, must have switched to the "opposing" side in the original debate. If, however, one emphasizes that Leopold, in his brilliant simile of "learning to think like a mountain" made use of a multi-scaled model of natural systems to analyze his errors in wildlife management, we can see Leopold as exploding the Pinchot-Muir dichotomy. He recognized that human values—and the actions pursued to secure them—unfold on a different temporal scale, associated with a different set of dynamics than do ecological and evolutionary processes and the much slower dynamics that drive them (O'Neill, et. al., 2007).

I credit Leopold with having made a breakthrough in understanding the multiple scales of time and space as presenting different challenges to human actors and managers, and as recognizing that concern expressed at these multiple scales can be associated with different ways of valuing natural systems. On this more pluralistic interpretation, it is possible also to recognize that he saw the problem of finding appropriate policies to manage each of these dynamics, and to do so in a way that respects both human needs and desires, and the ecological constraints implicit in any plan to protect natural systems and the species that inhabit them. Hadley's definition was central in his attempt to integrate these two layers of value and associated dynamics. Because it applies not at the scale of individual consumers or hunters, but rather at the scale at which we judge the actions and practices of a culture, Leopold was able to match his environmental guideline—survival in the long run—to cultures and to treat the values so pursued as independent of the individual wants, needs, and choices that impinge on the system on the shorter term and more locally.

In my book, (2005, esp. Sections 6.3 and 6.4), I explain in detail the crucial

impact of Leopold's comprehension of the multi-scalar nature of the environmental management problem as illustrated in his simile of thinking like a mountain. Callicott, et.al's monism creates a zero-sum game between humans and nature. This old-think way of characterizing environmental problems and environmental management does not do justice to the subtlety of Leopold's Darwinian vision. Leopold had defused the Pinchot-Muir debate by finding a "third way," a way on which the problems of management are necessarily multi-layered, and while there are ethical concerns on both the individual and cultural level, we can apply the test of experience at both scales. At the individual scale, morality applies to individual actions and affects other individuals, and humans have struggled since time immemorial to develop fair rules for interpersonal interactions; but conservation morality is seen at the scale of a culture, and Leopold emphasized the cumulative impact that grazing culture had on the land.

Once the problem of conservation is seen to involve multiple scales, the more complex conservation question becomes: are the needs and wants of individuals of the society being fulfilled in such a way that, over many generations, the practices developed indigenously allow survival for many generations? Survival of a culture in a place is the ultimate test of whether it has learned, through cultural learning, to use the land and yet leave it "alive" to support subsequent cultures. This is what I meant when, in (2005, pp. 72f), I argued that Leopold created a "third way" between Pinchot's development-oriented utilitarianism and Muir's choosing the side of bears in a war with humans. Whereas Callicott tries to tar Pinchot, all progressives, and Leopold as I interpret him, with the same brush, a more nuanced view of progressivism reveals a middle ground between Pinchot and Muir. As Minteer (2006) has shown, Leopold fell comfortably into a pattern of "civic pragmatism" that was both strongly environmental—in the active sense of restoration and advocacy for quality planning and development—and humanistic in the sense that all values, including "intrinsic" values in nature, are *human values* and protecting them is the right—adaptational—thing to do.

On this middle ground, productivity is valued, but the means used to produce goods and services by a population—the cultural practices they evolve for living in a place--will not be judged simply according to rapid economic growth; they must also be *adapted* in the sense that these practices allow the culture to survive. I describe this

middle way as follows: "The question…that Leopold's model sets out to address is whether a given culture has, or can develop, institutions and practices that will evolve responsibly to changes in its ecological context. By making the main question of survival one of developing institutions that are stable enough to perpetuate our current social values, including love of nature, and at the same time flexible enough to respond to rapid change both in culture and especially in the ecological context of cultures, Leopold shifted the question out of economics and out of ecology and into the area of active management." (Norton, 2005, pp. 72-73). Above, in offering an alternative to Callicott's dichotomous and monistic understanding of Leopold, I have tried to show how this "third way" was already well established for Leopold by 1923.

2. On the monistic model, Leopold would have come to see management problems as a conflict between what humans need and legitimately want, on the one hand, and what is "good for the land." According to the pluralist interpretation offered here, Leopold wanted an integrated ethic of management, one integrated over multiple levels, which allowed him to advocate different ethics depending on the nature and scale of a problem and also, in dealing with the public, other scientists, and decision makers to emphasize value orientations likely to appeal to them. Because I see Leopold as adopting—in the face of so much conflict and polarization among conservationists—the *convergence hypothesis*, there need be no dissembling or hypocrisy in recognizing that, in protecting ecological systems by managing the impacts of human communities ("cultures") at the ecological level, one is likely also to pursue policies that will protect the values of individual members of the culture both in the present and in the future (Norton, 1991; Minteer, 2009). This encouraged him to search for an integrated set of policies that will protect both ecological systems at the system scale, and aggregated human interests (over generations) at the same time. Since this controversy has been discussed in detail recently, I will only say here that the attempts to show counter-examples to the convergence hypothesis always choose some policy that humans *think is in their interest* and then to argue that this policy has damaged or will damage natural systems (Minteer, 2009). On closer look, however, in each case we find that, if we look at the interests of all human individuals including, for example, indigenous inhabitants of the system, and if we consider the long-term impacts of those policies on future people

living in that place, policies that harm natural systems will, on balance, also be bad for humans. Nowhere is Leopold's commitment to a convergent viewpoint more evident than in "Conservation as a Moral Issue," as he considers, and draws insights from one after another ethic, only to conclude that what ultimately counts is not ideologies that divide people intellectually, but whether a culture can evolve adaptations that support survival for many generations.

3. Finally, by acknowledging that Leopold recognized the importance of temporal scale and intergenerational impacts, and that he began treating these impacts as providing a test of successful cultural adaptation to a place as early as 1923, Leopold had begun to think on multiple scales and had begun to organize his thinking around three scales of time—human, durational/experiential time, ecological time, and evolutionary time (Norton, 2005). Callicott, et.al's interpretation, treating Leopold as a monistic anthropocentrist who converted to monistic nonanthropocentism, perpetuates the polarization between anthropocentrism and nonanthropocentrism. Rather than seeing Leopold as adopting the same zero-sum reasoning that had created the polarization, attributing to him a key role for Pragmatic epistemology that emphasizes survivability of cultures as the ultimate test of "experience" shifts our attention to Leopold's successful anticipation of hierarchy theory, as embodied in the simile, "learning to think like a mountain."(Norton, 199x, 2005, Ch. 6). 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 between Muir and Pinchot, was pointing toward a new direction, a direction that would emphasize "adaptation"—thereby recognizing Leopold's anticipation of adaptive management processes as opportunities to learn by doing—but it also recognizes that Leopold had provided a remarkable anticipation of what we would today call a concern for "sustainable living."

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Endnotes

[i] The author graciously thanks Robert Kirkman, Ben Minteer, and Piers Stephens for extremely helpful suggestions on a draft of this paper. Remaining errors are of course my responsibility.

[ii] I will follow Callicott, et al., in the convention that capitalized "Pragmatism" will refer to the philosophical movement/viewpoint of American Pragmatists and their followers, while the uncapitalized use of the term will refer to the quotidian meaning, as a practical and experimental approach to everyday problems.

[iii] While James showed respect for John Stuart Mill, Mill's ethic recognized "higher and "lower" desires, which was combined with a strong emphasis on education. This view was attractive to some pragmatists because it holds out the possibility of learning one's way to more sophisticated pleasures. That said, to suggest that pragmatists showed interest in Mill's idea of preference transformation through ducation, would hardly establish a connection between pragmatism, utilitarianism, and capitalism, since Mill, who was the first advocate of a "steady-state" economy, sometimes described himself as a "socialist." So Callicott, et. al.'s attempts to drive a wedge between Leopold and the pragmatists by associating a pragmatist interpretation of Leopold with rampant capitalism are futile. Indeed, pragmatists themselves, including especially Dewey, were serious critics of capitalism. Thanks to Piers Stephens for sharpening my argument here.

[iv] To understand my actual position, see Section 3.4 of (Norton 2005).

[v] Note that Callicott, in other writings, seems to enthusiastically endorse a denotative understanding of linguistic meaning as he insists that the task before him and other advocates of intrinsic values in nature is a matter of "rectifying names" (Callicott, 2002, p. 4.

[vi] I am grateful to Piers Stephens for sharing his research that reveals the ways in which James's philosophy, especially his views on experience, are represented in Leopold's writings.

[vii] 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, to be irrelevant.

[viii] Again, I am indebted to Piers Stephens for this important source on the question of "nobility" of humans.