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Useful Concepts and Approaches to Ethics in Natural Resources Management

John D. Fox, Jr.¹

ABSTRACT: My objective in this paper is to highlight a few concepts and approaches from ethics that might serve as food for thought when students are wrestling with controversial natural resource issues. Overall, I'm advocating critical reflection, empirical inquiry, and intellectual honesty. I am particularly going to look at the interrelationship between science and ethics. I suspect not everyone will agree with everything I suggest, but, as in the classroom, my purpose is to stimulate thought and dialogue. First, I present some basic concepts followed by a simplified summary of classical approaches to ethics. Finally, I suggest that Aldo Leopold's land ethic has been misinterpreted by some of his modern disciples.

INTRODUCTION

The Natural Resources Management program at the University of Alaska Fairbanks strives to instill the intellectual virtues of critical reflection, empirical inquiry, and intellectual honesty in the context of producing a technically competent and ethically responsible professional (see Wilson, 1999 for details on these intellectual virtues). My objective is to highlight a few concepts and approaches from ethics that might encourage these virtues as food for thought when wrestling with natural resource issues. I am particularly going to touch on the interrelationship between science and ethics. I suspect not all will agree with everything I say, but I hope it might launch you into ethical dialogue.

USEFUL CONCEPTS

First of all, science and ethics are very much interdependent fields of human endeavor. Ethics without science is at best uninformed and at worst delusive, while science without ethics is at best unguided and at worst downright dangerous. Perhaps the clearest principle regarding the relationship between science and ethics is "ought" implies "can". "Stop continental drift" cannot be an ethical mandate! While one might pontificate that we "ought" to stop the "homogenization" of the world's ecosystems or cultures, it may be something we just cannot prevent. In a broader context, Kenneth Boulding (unknown) said: "The most worrying thing about the earth is that there seems to be no way of preventing it from becoming one world."

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While "ought" implies "can", the inverse is not true. "Can" does not imply "ought." Obviously, we could transform the boreal forest into a vast tree farm. But, that doesn't automatically mean we should. Of course, "can" does imply a choice, and not everyone will choose the same path. To understand human nature is to understand the difficulty of saying "no" to "can".

Another very important concept is captured by the words **"is" does not imply "ought."** Just because something "is" a certain way scientifically or factually, does not mean it ought to be that way in an ethical sense. There are many forms of this principle and related ideas. David Hume (1740) noted the logical fallacy of deriving an "ought" conclusion from purely factual premises – the so-called **"is-ought"** dichotomy. G.E. Moore (1903) coined the term **"naturalistic fallacy"** to reiterate that we cannot substitute any single natural or empirically verifiable term for our meaning of "good". "Good" means what we mean by "good"! "Good" is a fundamental, intuitive, and unique concept that cannot be broken down into something else. He applied this principle to argue against Herbert Spencer's "social Darwinism" that equated "good" with "survival". Likewise, today one cannot substitute ideas such as "productivity", "bio-diversity", or "sustainability" to encompass the full meaning of the word "good". In spite of this, we continue to see signs of such "naturalistic fallacy" frequently in ecology and ecosystem management from folks who, I would argue, purport to be dealing only with the facts (scientists). Old growth forests are somehow deemed good or better than early successional forests. Native species are somehow "good" while non-native species are "bad". Such proclamations often take on the air of normative statements. Some seem to go to great efforts to avoid acknowledging that the concern over nature is really instrumental to personal or social welfare. The implication or direct claim that humans should behave in a certain way because it is "good for the ecosystem" is unclear thinking unless a specific link to human welfare is made. Contrary to popular rhetoric, the ecosystem isn't an entity that has "interests" per se, that can be fostered or subverted. **Ecosystems are not idealizations, they are realizations!** It seems sometimes we aspire to find or define the perfect ecosystem – one that sustains the production of some natural condition that is being subconsciously substituted conceptually for "good". Perhaps we could call this the "Shangri-La Syndrome" or the "Garden of Eden Syndrome"! What ever one calls it, it is a case of the naturalistic fallacy, at least if it is not acknowledged that by "good" we mean what is good for humans, living now or in the future.

Both science and ethics derive in humans from the same intellectual capabilities: ability to wonder, the ability to imagine alternative actions, the ability to project their possible consequences, and the ability to evaluate and choose among alternatives. But it is important not to confuse the realm of fact with the realm of value. Although the realm of fact informs the realm of value, scientists have no greater qualifications to make value judgments outside the realm of science, than others. In fact, scientists accept the challenge to remain objective when acting in that role, recognizing they, like non-scientists, have their own personal values. We certainly don't want to institutionalize a fuzzy boundary between fact and value by the language we use in science. Under the haze of ecological anthropomorphism it may be all too easy to mistakenly locate "good"

in the ecosystem and then relinquish ethical decision-making to the technical expert or scientist. I would strongly caution against that!

There are no “rights” in nature! While this may be viewed as a bold and radical statement, I would argue that the concept of rights is a uniquely human construct invented by humans, albeit, based on “human nature”. Rights, so defined, assume equality with, reciprocity from, and responsibilities to other human beings. I do not argue that human beings, as moral agents, do not have duties to entities other than moral agents – I just don’t think “rights” is the appropriate, logically consistent vehicle to express or implement this concept. Or, in other words, one cannot have rights without duties, but one can have duties without rights. A common device in environmental ethics books is the “last person” thought experiment. Here one asks would it be morally wrong for the last human being on earth to willfully destroy the biosphere as his last act. I propose another thought experiment for those who advocate “rights” for animals, trees, ecosystems, etc., -- imagine there are no human beings on earth, would “rights” exist in any meaningful and operational way?

TRADITIONAL APPROACHES TO ETHICS

Once we have chewed on these basic ideas we are still faced with the problem of choosing what to do. Do we all have to become philosophers in order to make ethical decisions? No, we do not; at least not in an academic sense. Remember, just because one might have a Ph.D. in Ethics doesn't make one ethical! Yet, we all can become better thinkers and better at ethical analysis. Mortimer Adler (1991) expresses Aristotle's insight when he says the ethical person is one who has "the habit of right desire", implying that we can develop through coaching and practice the skills necessary for ethical thinking. So, let's look at a few approaches to ethics as simplified by Marvin Brown (2003). He recognizes three approaches that we use in everyday life and suggests we invoke all of them in performing an ethical analysis.

One approach to ethics he calls the “**Ethics of Consequences**”. Here one focuses on the actual or projected results of an action or proposal. This is certainly relevant to our topic and places a fairly heavy emphasis on “science” to assess the feasibility and consequences of a proposal. Based on the “utilitarian” approach of Jeremy Bentham and John Stuart Mill, and applied by Gifford Pinchot, it has become a dominant theme in the assessment of public policy through economic cost-benefit analysis and more recently risk analysis. The ethical concept here is maximum “happiness”, “welfare”, or “utility” and is traditionally characterized by the phrase “the greatest good for the greatest number.”

A second approach to ethics Brown calls the “**Ethics of Principle**”. Sometimes we need to focus on the act itself, regardless of the consequences. Has some ethical principle been violated? Usually this approach recognizes limits to “the greatest good for the greatest number” as society defends personal freedoms and rights against the potential tyranny of

the majority. The ethics of principle focuses on mutual respect and might be characterized as “the golden rule”. Concepts of “justice” and “fairness” weigh heavily here.

A third approach to ethics is called the “**Ethics of Purpose**”. Here one focuses on the person (or agency) doing the act and asks whether it is consistent with his or her (or agency’s) role at the time, or the fulfillment of their purpose. Does the actor have special responsibilities by virtue of his/her purpose in the context of the issue? We all play multiple roles in life. I might be judged based on being a father, a spouse, a teacher, a forester, or a friend. This approach is the foundation for professional codes of ethics associated with special duties or responsibilities willingly assumed by those with special training and commitment.

ENVIRONMENTAL ETHICS

What about the environment, environmental ethics, land ethics, Aldo Leopold? Certainly, there are many competing ideas on the appropriate theoretical foundation for an “environmental ethic”. They all have strengths and weaknesses when applied to environmental issues. Let’s look at it this way -- ethics are about relationships – relationships with ourselves, other individual human beings, our community and its institutions, other living beings, perhaps with a believed higher power, and, as more recently recognized, with our physical and biological environment. I contend that if you take human beings, as social animals, put them together in a given place or environmental setting, add “time”, you will get what we call “culture”. I particularly like the point of view of Gerlach and Bengston (1994) who said:

“Humans interact with nature primarily through culture (socially constructed and shared adaptive strategies and underlying values), and social structures (the expressions of these strategies and values in action and organization).”

The science of ecology helps us to identify and understand our relationships with our physical and biological environment, to illuminate the interdependencies, to identify and project the consequences of our actions on that relationship. However, because both ecology and ethics focus on relationships, it may be all too easy not to recognize when one has crossed the boundary between fact and value. The science of ecology describes, tries to understand, and attempts to predict the consequences of change; but it does not judge. Human beings must recognize and then be responsible for, their relationship with the biotic and abiotic environment. My relationship with my wife, my children, my dog, my community can be described, documented as to its change over time, and even explained by psychologists, sociologists, and anthropologists. However, an ethical judgment of me in those relationships must bring the multidimensional world of ethical concepts (intuitive, interpersonal, communal, and perhaps religious) to bear. If my action affects the pattern of my relationship with the above in light of such concepts as justice, welfare, respect, and duty, I can then be subject to ethical judgment.

I think one of the biggest pitfalls of environmental ethics is the naturalistic fallacy. We are led to believe there is some ideal condition of the ecosystem that represents how the world "should be" (usually as uninfluenced by humans), that can then be used as a reference point to strive for, maintain, or restore. Modern ecosystem management focuses on the "condition" of the system rather than on outputs, and we casually accept the notion of "ecosystem health", as if an ecosystem had an ideal state. I claim that much of this is anthropomorphism, argument by analogy, and dangerous flirtation with the naturalistic fallacy. Without critical reflection, empirical inquiry, and intellectual honesty, metaphors can replace clear thinking and lead to conceptual errors and foolish outcomes.

As good foresters and land managers you might ask "But what does Aldo Leopold say?". To some extent Aldo Leopold (1949) has led us down this path with his often quoted aphorism:

"A thing is right when it tends to preserve the integrity, stability, and beauty of the biotic community. It is wrong when it tends otherwise."

But, current science tells us that ecosystems are what they are: dynamic open systems more frequently than not in a state of disequilibrium and of which humans are a part (Pickett and Ostfeld, 1995). Callicott (1996), in light of this contemporary understanding of ecosystems, struggles to "update" Leopold's maxim. He says

"One hesitates to edit Leopold's elegant prose, but as a stab at formulating a dynamized summary moral maxim for the land ethic, I hazard the following: 'A thing is right when it tends to disturb the biotic community only at normal spatial and temporal scales. It is wrong when it tends otherwise.'"

So, was the eruption of Mt. St. Helens "wrong"? I believe Callicott's (1996) concern that Leopold's maxim needs updating reveals his misunderstanding in the first place. Leopold's words need updating only if one assumes that Leopold thought that stability, integrity and beauty were inherent properties of ecosystems as opposed to states of the ecosystem that humans desire, value and benefit from. Leopold knew that nature was dynamic! He knew humans were a member, albeit, "just plain member" of the biotic community. And, he certainly knew that beauty was in the eye of the beholder. Leopold as ecologist was, in many ways, ahead of his time and Leopold as ethicist revealed the "golden mean" approach of classical philosophers (see Leopold, 1932; Arnhart, 2000). He did not advocate the substitution of an "eco-centric" ethic for an "anthropocentric" ethic. He never even used those terms. He advocated a broadening of human interest to encompass the stability, integrity, and beauty of the biotic community. I think someone who got the spirit and philosophy of Leopold right, was the seldom quoted Joseph Wood Krutch

"Conservation is not enough... To live healthily and successfully on the land we must also live with it. We must be part not only of the human community, but of the whole community... It is not a sentimental but a grimly literal fact that unless we share this

terrestrial globe with creatures other than ourselves, we shall not be able to live on it for long.... You may if you like, think of this as a moral law. ...If we do not permit the earth to produce beauty and joy, it will in the end not produce food either.” (1955).

The problem and yet utility of ethics is that they tend to look at things in the long run and counter-balance our temptation to discount the future in favor of satisfying immediate needs or desires. Thomas Jefferson said: “The earth belongs in usufruct to the living.” (Your assignment is to look up the meaning of the word "usufruct"!) Those living today must use nature to meet their needs, but must also consider their duties to future generations. This idea is fundamental to a stewardship approach to land ethics, relying heavily on the ethics of consequences as seen in the long-run, and the ethics of purpose by invoking our “role” as caretaker (by virtue of rationality and free will), and the ethics of principle constraining our actions by focusing on justice and respect for individual human beings, now and into the future.

ETHICS, RISK, AND THE PRECAUTIONARY PRINCIPLE

Ethics, in a way, can also be viewed as a qualitative risk analysis! It is a major way of dealing with uncertainty. This is particularly challenging, however, in the midst of rapid social, technological, and environmental change. Consequently, even ethical prescriptions themselves need to reflect a balance between blindly accepting conventional wisdom on the one hand, and summarily rejecting it on the other. That is why analysis is called for. Related to this later point, the concept of “the precautionary principle” has emerged and has been adopted by some engaged in environmental and natural resource debates. One definition was put forth at the Wingspread Conference in Racine, Wisconsin in 1998:

“When an activity raises threats of harm to human health or the environment, precautionary measures should be taken even if some cause and effect relationships are not fully established scientifically.” (as cited by Appell, 2001)

This principle has so captured the imagination of people that there has been a separate conference dedicated to it (see: <http://www.cid.harvard.edu/cidbiotech/bioconfpp/>). David Ropiek and George Gray (2002) point out two contrasting views. They cite Edmund Burke, the 18th century British politician, as saying “Early and provident fear is the mother of safety”, i.e., “It’s better to be safe than sorry!”. They also cite American essayist Randolph Bourne in 1913 as saying: “We can easily become as much slaves to precaution as we can to fear. Although we can never rivet our fortune so tight as to make it impregnable, we may by our excessive prudence squeeze out of the life that we are guarding so anxiously all the adventurous quality that makes it worth living.” It seems to me that rigid or extreme application of precaution advocates a “do nothing until everything is known” strategy. If followed, one would never get out of bed in the morning! A more common sense interpretation would suggest that when faced with uncertainty, take precautions against undesirable outcomes. This approach to precaution seems to at least presuppose an action will be taken.

CONCLUSIONS: MEANS AND ENDS

The role of the scientist or technical expert is to suggest possible consequences of actions and help attach probabilities to alternative futures. The role of the scientist or technical expert is not, however, to make the final decision by setting thresholds of acceptable risk, or by injecting personal ethical weighting factors in the summing of positive and negative consequences. That is the role of ethics as reflected in public policy, as manifested through public input, and as dictated by public and personal “purposes”. The ethics of consequences, the ethics of principle, and the ethics of purpose all enter into public and private decision-making. A final thought on ethical decision-making is not to confuse means and ends. One should not use cost/benefit analysis or risk analysis to determine ends (see Sagoff, 1988, 2003). These are appropriate analyses to help choose efficient or effective means once a clear end has been determined. The determination of those ends, ie., what kind of world, what kind of environment, what kind of society do we wish to live in, obviously involves personal, social, and hopefully, ethical processes. Mortimer Adler (1991) reminds us that ethics is basically using the right means to accomplish good ends.

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