

## Northwest Science Forum

Keith S. Hadley, Department of Geography, Portland State University, P.O. Box 751, Portland, Oregon 97207-0751, e-mail [hadleyk@geog.pdx.edu](mailto:hadleyk@geog.pdx.edu)

### Science, Advocacy, and Ethics: A Response to Mills

*An ethic, philosophically, is a differentiation of social and anti-social conduct.*

Aldo Leopold (1933)

In his contribution to *Northwest Science Forum* (Spring 2000), Mills sought to define the ethical role of scientists who participate in shaping natural resource management practices and policy. Although I share many of Mills' ideas regarding the essential nature of science, I have strong objections to his position on advocacy. Below I critique Mills' contentions that scientists cannot ethically be both scientifically credible and advocates. My goal is to not reproduce the details of the ongoing debate regarding advocacy in science found in the pages of several science journals including *Conservation Biology*, *Science*, and the *Bulletin of the Ecological Society*; those discussions are noteworthy but exceed the scope of this response. Here, I focus my comments on two philosophical points of Mills' argument. First, I examine Mill's inconsistent use of the term advocacy. Second, I briefly address the subject of ethics and the evolving role of science as advocacy.

To begin, I would like to illustrate the difficulty of arguing against advocacy. I refer specifically to one of Mills' early paragraphs where he describes what he sees as the role of science in natural resource management decision-making: "In playing these science roles in decision-making settings, it is appropriate that the scientist forcefully *advocate* (my emphasis) the consideration of the relevant scientific information" (p. 167). Mills later admonishes scientist advocates by noting, "An attempt by the scientist to simultaneously be a science information provider and a position advocate is an inherent conflict of interest" (p.167). He continues by noting that these

"... two different roles cannot be credibly played by one person" (p. 168). Based on these and other statements, one must ask if Mills would have a scientist discount her(his) own arguments just because she(he) is an advocate of science? Few readers of this journal would discard the important contributions of science simply because we advocate its use. Yet, if we *believe in science*, we are its advocates.

Mill's commentary includes other logical inconsistencies. He notes, for example, that, "... a recommendation is likely to be seen as position advocacy, and reasonably so" (p. 167). This is conjecture at best and I believe misinterprets the role of scientists and resource managers. I would argue that recommendations, instead of being viewed as "position advocacy," are and should be viewed as general statements that are to be tested or validated using the available supporting evidence. It is the role of the scientist or resource manager to provide the evaluation process that exposes both the merits and pitfalls of each position or recommendation. The fact that recommendations may or may not represent position advocacy is again irrelevant as each proposal must be evaluated based on its own merits. More important to this process is its openness, the qualifications of the decision makers, the criteria used for accepting or rejecting a "recommendation," and the political realities of the evaluation process.

What then is the role of advocacy and ethics in science? Discussions regarding the role of science in decision-making have a long history in

the social sciences and philosophy. Notwithstanding the contributions of Leopold (1933) and other progressive thinkers, broad discussion concerning the role of science and decision-making has only recently become politicized within the natural and applied sciences (Wagner 1996). Nonetheless, I submit that Mills' commentary represents an anachronistic perspective to contemporary scientific ethical standards. The view of science as "objective" and "neutral" is slowly being replaced as scientists begin to understand the biases of their own work and continue to question how science should be interpreted and presented to the public and resource managers. This shift is clearly documented in the commentaries and articles found in many of our journals including *BioScience*, *Conservation Biology*, *Ecological Society of America Bulletin*, and *Science*. The proliferation of recent applied science journals such as *Ecological Applications* and *Ecological Conservation* further suggests that scientists and their professional organizations believe they need to play a less passive role in resource management if they are to address the environmental and ecological problems that face resource managers. Although the role of advocacy remains a hotly debated topic, there has been a clear shift toward scientific advocacy as the ethical norm.

#### Literature Cited

Leopold, A.D. 1933. The conservation ethic. *Journal of Forestry* 31:634-643.  
Miller, D. 2000. Being an absolute skeptic. *Science* 284:1625-1626.

A more serious threat facing science-based resource management is not advocacy but expediency. The pitfalls of political-economic and socially-induced expediency are well argued by Thoreau (1866) who noted that expediency often results in superficial solutions to structural problems. In the face of this more serious problem, I would argue that advocacy is not only ethical (*sensu* Leopold 1933) but that it is a prerequisite to a decision-making process that is as responsive to ecological realities as it is to economic and political expediency.

Like most scientists I share many of Mills' concerns regarding the serious nature of advocacy. We also share a belief in the scientific process and the maintenance of scientific credibility through the critical method (Miller 2000). Where we disagree is in our opinions regarding the ethical nature of advocacy. The success or failure of scientific-based advocacy should depend on the quality of the science and not on the advocated position. From a philosophical perspective, there is no alternative; scientists *are* advocates. Ergo, I would argue that it is the sacrifice of *good* science for the illusion of neutrality and objectivity that is unethical.

Thoreau, H.D. 1866. Civil Disobedience. Reprinted in *Civil Disobedience and Other Essays*. Dover Thrift Editions, Mineola, N.Y. 1993.  
Wagner, F.H. 1996. Ethics, science, and public policy. *BioScience* 46:765-766.

---

(Note: This is the first of several articles in a series on this topic)