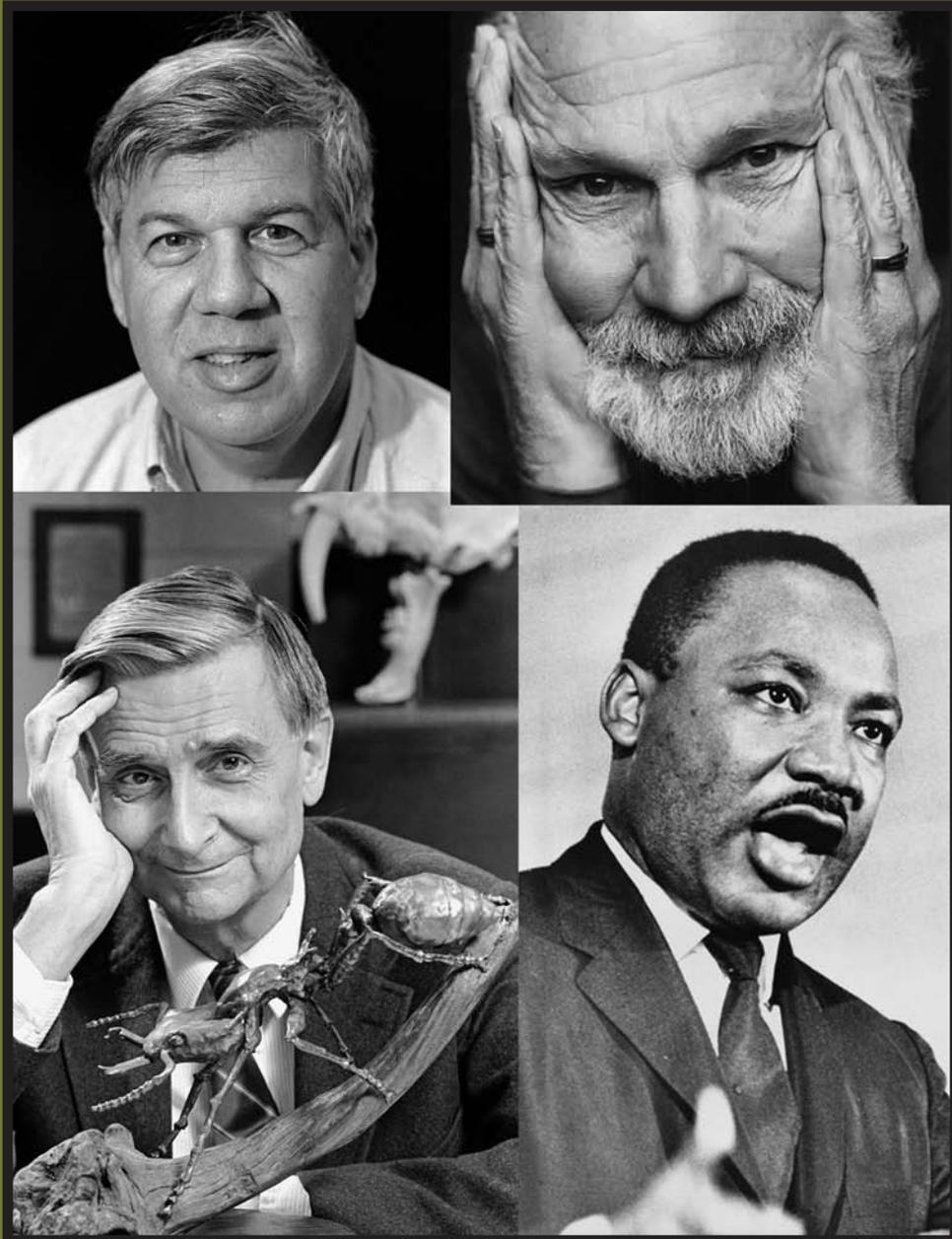


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Conservation as Virtue: a Scientific and Social Process for Conservation Ethics

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Abstract: *Most scientists take ethical arguments for conservation as given and focus on scientific or economic questions. Although nature conservation is often considered a just cause, it is given little further consideration. A lack of attention to ethical theory raises serious concerns for how conservation scientists conceive and practice ethics. I contrast two common ways scientists approach ethics, as demonstrated in the writings of Stephen Jay Gould and E. O. Wilson. Gould casts severe doubt as to whether any ethics are possible from science, whereas Wilson proposes science as the only path to ethics. I argue these two methods ultimately limit popular support for conservation and offer Alasdair MacIntyre's "virtue ethics" as an alternative. Unlike Gould and Wilson, MacIntyre provides an ethical theory that reconciles scientific inquiry and social traditions. Recent studies of the Civil Rights Movement in the United States affirm MacIntyre's claims and provide important insights for conservation today. These accounts argue that social solidarity and political success against segregation were possible only as rooted in the particular language, logic, and practices of a robust cultural tradition. If correct, conservation science should attend to several questions. On what basis can conservation achieve widespread cultural legitimacy? What are the particular social currencies for a conservation ethic? What role does science play in such a scheme? MacIntyre's careful positioning of scientific and social traditions provides a hopeful ethical direction for conservation.*

Keywords: Alasdair MacIntyre, civil rights, moral philosophy, science studies, social traditions, strict empiricism, virtue ethics

La Conservación como Virtud: un Proceso Científico y Social para la Ética de la Conservación

Resumen: *La mayoría de los científicos dan como hecho los argumentos éticos y se enfocan en cuestiones científicas o económicas. Aunque la conservación de la naturaleza a menudo es considerada una causa justa, se le tiene poca consideración. La falta de atención a la teoría ética produce serias preocupaciones sobre la concepción y práctica de la ética por los científicos de la conservación. Contrasto dos formas comunes en las que los científicos se aproximan a la ética, como se demuestra en los escritos de Stephen Jay Gould y E. O. Wilson. Gould tiene serias dudas sobre la posibilidad de ética en la ciencia, mientras que Wilson propone que la ciencia es el único camino hacia la ética. Argumento que estos dos métodos limitan el soporte popular para la conservación y ofrezco la "ética de virtudes" de Alasdair MacIntyre como alternativa. A diferencia de Gould y Wilson, MacIntyre proporciona una teoría ética que reconcilia la investigación científica con las tradiciones sociales. Estudios recientes del Movimiento de Derechos Civiles en Estados Unidos afirman las propuestas de MacIntyre proporcionan perspectivas importantes para la conservación. Estas evidencias argumentan que la solidaridad social y el éxito político contra la segregación fueron posibles por estar enraizadas en el lenguaje, la lógica y prácticas particulares de una tradición cultural robusta. Si es correcta, la ciencia de la conservación debería atender varias cuestionamientos. ¿Sobre que base puede la conservación alcanzar legitimidad cultural generalizada? ¿Cuáles son las divisas sociales particulares para una ética de conservación? ¿Que papel juega la ciencia en tal esquema? El posicionamiento cuidadoso de MacIntyre respecto a las tradiciones científicas y sociales proporciona una dirección ética optimista para la conservación.*

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Palabras Clave: Alasdair MacIntyre, derechos civiles, empirismo estricto, estudios científicos, ética de virtudes, filosofía moral, tradiciones sociales

Ethics in Conservation Science

Since the discipline of conservation biology began in the late 1970s, scores of university departments, academic journals, and professional societies have emerged. These bodies form an academic collective of conservation science whose goals are to study and preserve nature. Toward this end, conservation science is often said to divide its efforts between scientific research and the application of research to affect policy (Soulé & Wilcox 1980; Soulé 1986; Meffe & Carroll 1997).

Despite increasing attention to the science of environmental conservation, conservationists are said to defend nature preservation for distinct reasons. That is, scientists attribute three kinds of “value” to nature: aesthetic, economic, and ethical (Ehrlich & Ehrlich 1981; National Research Council 1999). Biodiversity may inspire, provide resources and information, or have inherent value, respectively. Conservation scientists most often restrict themselves to scientific and economic theory, allowing others to scrutinize ethics and philosophy.

From the perspective of formal education and training, perhaps this theoretical focus is to be expected. But should it remain acceptable? Although avoiding the theory of ethics poses obvious intellectual gaps, it may also cause problems in conservation practice. For instance, overlooking ethical theory may avoid the necessary logic and terms needed to achieve greater cultural relevance through constructive dialogue with those who do not endorse a conservation ethic. For example, not all religious groups in the United States affirm a robust form of conservation. Many do, of course, but some contend with the science, others deem conservation a minor concern, and still others neglect the issue completely (Van Houtan & Pimm 2006). How may conservation scientists engage such groups if they only know scientific theory? Perhaps scientists, and especially conservation scientists, should not take ethical theory for granted.

Strictly Empirical Ethics

Essential to this discussion is conservation science’s immersion in ethical language (e.g., Barry & Oelschlaeger 1996; Meine & Meffe 1996; Roebuck & Phifer 1999; Wilson 2000; Soulé et al. 2005). Conservation, even if conceived on scientific grounds, is a framework for a specific “right” outcome. Protecting species, designing nature

preserves, restoring degraded ecosystems, promoting sustainable use—these are thought of as “good” undertakings (Marx 1970; Soulé 1985; Roebuck & Phifer 1999; Ludwig et al. 2001). When Pimm says he has “a moral responsibility as a citizen to make people aware of what science means” (Kaiser 2000), he shows that conservation science takes a moral stance and weighs judgments to specific decisions. For some scientists, wedding ethics and science is taboo (Wiens 1996; Norton 1998; Kaiser 2000; Nielsen 2001). For others, the opposite may be true, and one may necessarily flow from the other (Bazzaz et al. 1998; Lubchenco 1998; Ehrlich 2002). But whether the two are separate or joined, how conservation scientists “do” ethics deserves careful theoretical attention. If there is a lack of consensus on nature’s value, there may be even less consensus on how ethics are done (Callicott 2006).

According to many conservation scientists, however, empirical science seems the key ingredient in the recipe to save nature. Furthering science, promoting its appropriate use, protecting the Earth’s systems—these phrases appear successively in the mission statements of countless conservation organizations. The Society for Conservation Biology, for example, was formed to “develop the scientific and technical means for the protection, maintenance, and restoration of life on Earth.” The Ecological Society of America founded its Sustainable Biosphere Initiative more outspokenly. “Unless the science of applied ecology is based on a sound foundation, attempts to manage the environment are bound to fail” (Mooney & Levin 1991). As Lubchenco alluded in her presidential address to the American Association for the Advancement of Science, ecological preservation “can be only obtained through basic scientific research” (1998). Meffe and Viederman (1995) wrote that, “In an ideal world, biologists would experiment, observe, tell policy makers what to do, and it would be done.”

A trust in strictly empirical conservation ethics is widespread. That is, some scientific inquiry is the necessary means to determine the right measures for conservation (e.g., Lubchenco et al. 1991; Lubchenco 1998; Wilson 1998). Prominent ecologists encourage environmental scientists to demonstrate the broader societal significance of their research (Bazzaz et al. 1998; Ehrlich 2002). For Bazzaz et al. (1998), ecological science ought to consist of “(i) doing first-rate research and (ii) publishing it in the technical literature for the benefit of scientific colleagues” and “(iii) informing the general public (and, especially, taxpayers) of the relevance and importance of our work.” Ehrlich is more emphatic: “environmental scientists *can* be advocates, but also that they ethically must be

advocates" (2002). Journal articles therefore, not surprisingly, frequently offer broad policy or management implications (Meffe & Viederman 1995). Armed with scientific research, conservation organizations advocate policies and seek influence with political decision makers. Do these practices falsely restrict conservation to the domain of science? What would be the harm in viewing ethics as being strictly derived from experimental science?

This ethos of science dominance is not without its critics in the conservation community (Barry & Oelschlaeger 1996; Orr 1999; Butler 2000; Ludwig et al. 2001). Such critiques typically argue that "pure science" is a fiction, that no scientific observation is value free, and that scientific decisions can serve political and economic agendas. In essence, scientists are people too. Some then contend that giving science too much responsibility for a greater social welfare (like conservation) is like asking wolves to guard sheep (Butler 2000). Such criticisms are often well conceived, but seldom address a glaring issue: Can what is problematic—and consequently what is "just"—somehow be understood strictly scientifically or apart from a particular human social tradition? Furthermore, recalling the pastoral metaphor, if biodiversity conservation is sheep, maybe an important question to ask is: who plays the shepherd? Prominent scientists provide different answers.

Ethics from Two Influential Scientists

Many scientists are weary of a strong link between science and ethics. The late Stephen Jay Gould is the exemplar in the natural sciences. Gould proposed a theory of "nonoverlapping magisteria" to distinguish facts from morals (Gould 1997, 1999). Gould's repeated argument was that the two areas are essential—yet completely separate—in the human existence. There is no hope of finding any moral lesson from scientific facts; trying only makes matters worse. Gould later refined his theory but never backed away from its central claim: "Each of the domains or magisteria embodies, inside its own being, so many different methods, concerns, and styles of explanation that no knee-jerk united front could be conceived" (2003:156). As many know, the backdrop for Gould's arguments is the frequently hostile science and religion debates over Darwinian evolution. Gould's experience in this context led him to be extremely cautious with ethical statements. In the end Gould's caution prevented him from producing any ethic from scientific observation—a concept that is difficult to reconcile with conservation science. Mingling what Gould separates seems appropriate (indeed, even Gould [1990] does not always adhere to his theory). But how?

In his strictly empirical or mechanistic notion of ethics, E. O. Wilson's thinking is a distinct alternative to Gould's.

Like Aldo Leopold before him, Wilson defends the ethical premises of conservation biology, arguing that a scientific understanding of life's variety increases the ethical significance of protecting it (Wilson 1984, 1998). The more one knows, the more just a decision one may make. Here, unlike with Gould, facts and morals are not discrete; rather, they are purposefully aligned. Wilson contends that ethics are derived from scientific research—an idea widely affirmed in scientific practice. In Wilson's words: "An enduring code of ethics is not created whole from absolute premises but inductively... through an expansion of knowledge and experience" (Wilson 1984:124). Later Wilson is more explicit and defends a "purely material origin of ethics" (1998). Gould's exclusive sets are Wilson's flow chart.

Although many scientists may be sympathetic to Gould's position, they seem to practice Wilson's ideas more often. What is particularly interesting about Gould and Wilson is how their views reveal an ongoing division in the sciences. For Gould, science and ethics are inherently separate and ethics are, at best, a murky process for each person to navigate individually (and perhaps privately). For Wilson, ethics spring from the academic community through a process of observation, logic, and scholarly argument. Perhaps the very real differences between Gould and Wilson flow from their respective undertakings. Thinkers directly faced with immediate and tangible problems—species loss for example—are understandably inclined toward concepts of justice. Those defending the scientific method from ideology or religious fideism are understandably shy toward ethical commitments. Nevertheless, how ethics are done, who does them, and the particular social context for ethical reasoning, are all relevant and urgent topics for conservation science, the so-called "crisis discipline with a deadline" (e.g., Lovejoy 1980; Soulé 1986; Ehrlich 2002).

Whoever carries the responsibility for doing ethics, a stark reality confronts them. The ecological crisis is ever increasing and the voting public does not actually seem to care (Orr 2002; Ehrlich & Ehrlich 2004; Kristof 2005; Shellenberger & Nordhaus 2005). No environmental ethic is articulating and motivating lifestyle changes that are both significant and widespread. Is something therefore lacking with the ethical systems represented in Gould and Wilson? Alasdair MacIntyre's virtue ethics may provide hope.

MacIntyrean Virtue Ethics

An important figure in modern philosophy, Alasdair MacIntyre has contributed broadly to ethics, politics, metaphysics, and the social sciences (Murphy 2003). His work is in large part a critical response to his renowned instructors, the philosophers of science A. J. Ayer and Karl Popper. Like Gould, MacIntyre carefully scrutinizes the link

between scientific observation and ethics. Like Wilson, MacIntyre finds a place for scientific experience in ethics. Unlike Gould, MacIntyre argues that any scientific inquiry already has an ethics in tow and that all ethics require a particular sociology. Unlike Wilson, MacIntyre contends that ethics require traditions constituted by practices sustained in particular communities over generations by scientific argument and ritual. Although similar in several respects, MacIntyre is wholly different from Gould and Wilson.

Drawing from Aristotle, MacIntyre argues for an inexorable link between scientific inquiry and ethics. In *After Virtue* (1981:82) he states, "The modern contrast between the sphere of morality on one hand and the sphere of human sciences on the other is quite alien to Aristotelianism because. . .the modern fact-value distinction is also alien to it." Here MacIntyre helps us see that Gould's language of "facts" and "values" is misleading. Similar to the linguistic or neurological argument that language makes thought possible (e.g., Wittgenstein 1953; Gilbert et al. 2006), MacIntyre asserts that observers require concepts to comprehend what they see (MacIntyre 1981, 1999). Referencing Shakespeare's Hamlet, MacIntyre points to the catch-22 of scientific observation—until one knows what theories to adopt one does not know what is evidence, but unless one knows what is evidence one cannot tell which theories to employ. As a result, Hamlet's quest to understand his father's death and how he should act, are not seen as successive actions but the same action (MacIntyre 1977). One does not first perform one then the other; they are both done with the other immediately in mind. Namely, understanding is impossible without prior concepts and just action cannot be extricated from understanding. The ancient Greeks taught these ideas with the aphorism "to know is to do." In MacIntyre's view, any attempt to separate "knowing" from "doing" is a misconception.

Science-studies philosophers, especially Thomas Kuhn and John Ziman, treat science as socially embedded and socially constructed activity, as does MacIntyre. In *The Structure of Scientific Revolutions*, Kuhn (1962) casts science as a community of persons firmly set in historical contexts. In *An Introduction to Science Studies*, Ziman (1984) claims that social norms influence scientific inquiry and cast doubt on the existence of "pure science." According to MacIntyre (1981), Immanuel Kant, the father of the Enlightenment, even flirts with Ziman's idea. If scientific observation is not free from historical and social influences then Gould's fact-value barrier seems porous. Conservation biologists acknowledge this (Barry & Oelschlaeger 1996; Ludwig et al. 2001). What makes MacIntyre interesting is how he extends the argument of science-studies philosophy by focusing on the particular social context for ethical practice. In doing so, MacIntyre locates a void in most versions of ethics as practiced by conservation scientists.

For MacIntyre, observing, understanding, and acting intelligibly require the particular place of a social tradition. That is, both science and ethics require a particular place in human society. Although the context may vary it remains essential to their very nature. How an observation, or an ethical judgment, is framed is contextual: "There is no standing ground, no place for inquiry, no way to engage in the practices of advancing, evaluating, accepting, and rejecting reasoned argument apart from that which is provided by some particular tradition or other" (MacIntyre 1988:350). Scientific concepts therefore are of a social dimension and dependent on membership to some particular social or biological community (MacIntyre 1999). Therefore, ethics ultimately depend on how people doing them view themselves and the community to which they belong (MacIntyre 1988). Such a view challenges how scientists conceive ethics and contributes something new to conservation ethics (e.g., Callicott 2006).

Practical Consequences for Conservation

The implications of MacIntyre's argument mean it is a fateful mistake to think one can first determine moral rules abstractly or inductively and later apply them to specific cultural contexts. Yet what MacIntyre calls a mistake seems to dominate conservation science. For Hauerwas (2001), determining ethics wholly within science falsely discards the role of nonscientific social traditions in moral practice. A sustainable form of justice then is constituted by and maintained through social practices and traditions within local communities. Essentially, MacIntyre's argument does not invalidate science as a means or type of rational inquiry. However, it does check such inquiry from being a sole, asocial method in forming concepts of justice. Ethics are neither strictly empirical nor strictly a matter of an irrational faith. Rather, in MacIntyre's terms, any ethic requires a determinative will that is formed through membership in one's tradition (something that is often complex). An ethics without these relationships is empty formalism (MacIntyre 1977). Fundamental aspects of conservation biology—identifying ecological problems and solutions—tend to assume a general, inalienable, or universal account of justice. MacIntyre argues this approach is a philosophical mistake: no such thing exists.

The Civil Rights Movement in the United States is evidence to MacIntyre's claims. Two recent independent studies show that the practice of the biblical tradition, in particular, named racism a problem and fanned the movement into flame (Chappell 2004; Marsh 2005). Enthusiasm and solidarity did not come from a theoretical or academic "common sense" but were legitimized through the language and practices of Christianity (Orr 2001; Brooks 2004). Smart, socially abstract maxims, such as those

of then-prominent intellectuals John Dewey and Gunnar Myrdal, achieved nothing substantial for African American rights (Chappell 2004). To the contrary, segregation and disenfranchisement were overthrown dialectically—in the particular language, logic, and practices of a particular tradition. In this case, the dialectic was biblical, taking the form of a prophetic story, a pessimism in human institutions (this includes churches), corporate prayer, and—most notably—nonviolence. As for MacIntyre, these studies see the social tradition as the place where ethical reasoning takes place. Viewed this way, the Civil Rights Movement was a religious cause with political implications, not the reverse. Conservation as envisioned in the sciences seems to have this backward.

The dominant conceptions of ethics in conservation science may explain conservation's remarkable unpopularity. What ethical currency do socially generic recommendations carry? What is the social basis for sacrifice or allegiance to the cause of conservation? Conservation science—as an ethic—is no different from other forms of ethical practice. In MacIntyre's terms, ethics requires a particular communal framework for intelligibility. Conservation arguments, then, require expression in the language of social traditions if they are to be authentic and realized. The resulting goal is not practically intellectual but involves something akin to virtue. The problem with the current ethics in conservation science is that science alone is hard pressed to name virtues. Perhaps the immediate challenge facing conservation science is to identify the dialect within particular traditions that names nature conservation a virtue, and subsequently, to work a description of what form virtue takes from within the tradition. Yes, scientific research is crucial to articulation of ecological failings. But science itself cannot form socially sustainable ethics. Ethics are in some sense empirical, just not strictly so.

My argument here can be summarized with the following question: Is nature conservation a virtue or is it just good science? If it is plainly a scientific matter, then strict empiricism reigns and the environmentalists' battle is one of scientific research, political savvy, and power (Gill 2001). Nature—which includes human communities—likely loses a battle of this kind. On the other hand, if conservation is a virtue then scientific arguments alone are insufficient and the battle visibly involves ethics and social traditions, as well as science. Strict empiricism is then called into question or is, according to Wendell Berry, "pathological" (2000). The view I describe does not prefer insipid ideology over science, as has been the repeated accusation against the Bush administration (e.g., Lee 2003; Luntz 2003; Mooney 2005). Rather, my argument elevates science from simply purveying information to a sort of social prophecy, where prophets are not experimenting fortune tellers but professors of a hoped-for future. Then, as per MacIntyre, asking why we should care about conservation is not the right question. The so-

cial tradition names it a virtue; those doing conservation are just practicing their tradition. "Does the tradition regard conservation?" is a better question. The reason many Americans are thus not outraged at environmental destruction is likely that the tradition most determinative of their lives—individualism, consumerism, nationalism—does not practice a conservation ethic.

During his stirring "I have a dream" address Martin Luther King Jr. revealed the crux of his vision (Chappell 2004). He saw "out of the mountain of despair a stone of hope." King's metaphor is an apt paradox: hope lies amidst despair. Certainly conservation has its own "mountain of despair," as study after study demonstrates. Spinning despair into optimism for the sake of gaining popular support, as some suggest, seems an unwise distraction and avoids the larger issue. There is no robust hope in the dominant versions of ethics as practiced in the conservation sciences. To succeed as a social cause, conservation needs a hope that academic science itself cannot provide. Conservation needs a cultural legitimacy that inspires enthusiasm, allegiance, and personal sacrifice—in other words, actual changes in human behavior. Such a vision does not provide a straight path to easy answers; rather, it offers a description of ethics currently estranged from conservation science.

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