What Are Forests For: The Place of Ethics in the Forestry Curriculum

A survey conducted to ascertain the degree of formal training in ethics offered to Canadian and American professional foresters and natural resource managers and technicians indicates that forestry ethics is not consistently and coherently covered in forestry curricula. We propose a framework for teaching forestry ethics such that professional codes of ethics are supplemented by environmental ethics and forest history. Environmental ethics offers a rich source of material to guide personal reflection, clarify the ethical dimensions of particular management decisions, and offers tools to facilitate normative discourse. However, this literature often lacks an integrated consideration of what actually happens. Forest history with its in-depth case studies and broad stroke depictions of past forest management decisions provides a surrogate for lived experience and a long-term perspective.

Keywords: ethics, forestry, curriculum

The traditional education of foresters and other resource managers has emphasized the natural sciences and technical skills almost to the exclusion of relevant materials from the social sciences and humanities, particularly ethics. Although there are exceptions, these curricula predominately reflect a positivist approach to science where facts and values are strictly separated and science is viewed as value neutral (Coufal and Spuches 1995b). The situation is a profound paradox, for an allegedly value-neutral framework, often masquerading under the name “scientific forestry,” is used to decide what to do. Forests and our relations to them present numerous questions of value that include the following: What are forests for? How do commercial values of forests relate to their places as a habitat for nonhumans? Are forests’ resources properly thought of in terms such as discounting and substitution? What is their role in climate stabilization? What roles should they play in human cultural life and self understanding? In the positivistic tradition of scientific forestry these questions are simultaneously suppressed but are de facto decided.

Given the public scrutiny of forest management, controversy over practices in recent decades, and changing values about forests (Bengston 1994), the complex normative considerations in forestry decision-making have greatly increased the need for supplementing the traditional technical forestry curriculum with competencies in ethics. Traditionally, when ethics is present in the curriculum, it emphasizes professional ethics: duties that one has to an employer or landowner, fair accurate accounting, fair competition, honest practices, and professional obligations of foresters to their profession and to third parties (Coufal and Spuches 1995b). We hold that these considerations are necessary but not sufficient for a sound education in forestry ethics.

Environmental ethics should be a core component of the ethics taught to foresters. By environmental ethics we understand a discipline that systemically studies the moral relationship of human beings to and the value and moral status of the environment and other species. “Moral” and “morality” expansively refer to a code of conduct governing relationships between humans and humans and nonhumans including the environment, which, given specified conditions, would be followed by all responsible people. To date, few established environmental ethics courses in natural resources management curricula have been developed (Spuches and Coufal 2000).

With a better understanding of ethical traditions, the decisionmaking process would be more amenable to rational normative discourse. Some authors suggest that environmental ethics could become "the ...
In this article we present the results of a survey of ethics content in the forestry curricula of North America. The basis of this current portrait of forestry ethics is a framework for teaching ethical reasoning based on practical reasoning. We contend that there is a need for a more substantial curriculum that would teach forestry professionals professional ethics and environmental ethics.

Methods

We contacted by e-mail 90 institutions offering undergraduate, graduate, and technical (generally a 2-year degree) forestry programs in the United States and Canada. We have considered only forestry programs accredited by the SAF and by the Canadian Forestry Accreditation Board. We requested any information regarding forestry ethics curriculum in their program; in particular, we asked for a copy of course syllabi with relevant content. We sent a second request for information after 3 weeks to the institutions that had not responded to the first e-mail. We elicited a total of 57 responses, which represents a 63% response rate. For those institutions that did not respond to either request, we searched their university websites to obtain their forestry curriculum, list and description of courses, and syllabi when publicly available. We have substantial data from a total of 85 programs.

Table 1. Percentage of North American forestry programs* that include ethics in their curriculum and the percentage of these programs that emphasize environmental ethics, professional ethics, or a mix of the two and/or other topics in their curriculum.

<table>
<thead>
<tr>
<th>Degree</th>
<th>Number of programs</th>
<th>Programs offering ethics in their curriculum</th>
<th>Topics emphasized in programs offering ethics in their curriculum</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Environmental ethics</td>
</tr>
<tr>
<td>Undergraduate and graduate</td>
<td>56</td>
<td>46 (82%)</td>
<td>6 (13%)</td>
</tr>
<tr>
<td>Technical</td>
<td>29</td>
<td>17 (59%)</td>
<td>2 (12%)</td>
</tr>
<tr>
<td>All degrees</td>
<td>85</td>
<td>63 (74%)</td>
<td>8 (13%)</td>
</tr>
</tbody>
</table>

* Canadian Forestry Board and Society of American Foresters.

Table 2. Percentage of North American forestry programs that offer ethics courses and the percentage of these courses that emphasize environmental ethics, professional ethics, or a mix of the two and/or other topics.

<table>
<thead>
<tr>
<th>Degree</th>
<th>Number of programs</th>
<th>Number of programs offering a course in ethics</th>
<th>Topics emphasized in ethics courses</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Environmental ethics</td>
</tr>
<tr>
<td>Undergraduate and graduate</td>
<td>56</td>
<td>18 (32%)</td>
<td>10 (56%)</td>
</tr>
<tr>
<td>Technical</td>
<td>29</td>
<td>7 (24%)</td>
<td>0</td>
</tr>
<tr>
<td>All degrees</td>
<td>85</td>
<td>25 (29%)</td>
<td>10 (40%)</td>
</tr>
</tbody>
</table>

Analysis. For each institution we tabulated (1) whether ethics was part of the curriculum, (2) if ethics was taught as a separate course, and (3) what the focus of the ethics courses were. We also extracted relevant information provided in the e-mail responses, such as the sorts of courses that included modules or discussion of ethics.

Results

Ethics in the Curriculum. The results of this survey indicate that 63 of 85 (74%) of the accredited forestry programs include ethics in their curriculum (Table 1). In all forestry programs (undergraduate, graduate, and technical) that included ethics in their curriculum, 32% emphasized professional ethics (i.e., referring to professional obligations to clients, conflicts of interests, and others) and 13% emphasized environmental ethics (i.e., referring to ethical standards on how forests should be managed), but the majority, 56%, emphasized other topics (Table 1). For example, other topics may comprise the norms of scientific research; philosophical ethics, i.e., ethical theories such as utilitarianism and Kantianism; sociological and economic analyses of the value of natural resources and other environmental values; environmental and forest history; biotechnology; critical thinking; and natural resource science and management approaches.

Specific Ethics Courses. One-third (29%) of the 85 forestry programs we surveyed offered specific ethics courses (Table
2). A majority (56%) of the ethics courses taught in the undergraduate and graduate forestry programs are environmental ethics (Table 2). The technical forestry degree programs offer ethics courses that emphasize topics other than environmental and professional ethics, such as philosophical ethics, critical thinking, and ethics in scientific research. Hence, only 10 of the 85 (12%) programs for which we obtained data had a course on environmental ethics, and only 4 of the 85 programs (5%) had a course on professional ethics.

Other Courses in which Ethics Is Taught. Those forestry programs that include ethics in their curriculum but offer no specific courses in forestry ethics may address ethics in relation to specific subject matter. These courses span the breadth of the forestry curriculum: silviculture, forest ecology, timber supply, forest pathology, and wood procurement, to name a few. Although some of these may contain relatively formal ethics modules, others simply address ethics in an ad hoc manner.

Objectives of Forestry Ethics Courses. The forestry ethics course syllabi we reviewed contain a wide range of objectives. We have organized these objectives according to the following topics: ethics and public policy, professional ethics, practical reasoning skills, history and sociology, and written and oral communication skills. Although the courses we reviewed do not necessarily contain objectives that pertain to all of these topics, they usually state objectives that belong to at least two or three of them.

Under the topic of ethics and public policy, students may be expected to become familiar with the value systems of western and nonwestern cultures; the concepts and methods of ethics that apply to issues regarding natural resources; the relationship between ethical theory and ethical action; the relationship between management practices and societal needs and values; the theory, procedure, and methods by which policy is created; and international problems in forestry such as carbon sequestration, biodiversity preservation, and international trade and poverty.

With respect to professional ethics, course objectives include understanding the role of professional ethics in forest and natural resource management; becoming familiar with the professional codes of ethics of foresters; applying these codes to the kinds of practical problems that arise in professional practice; critically assess alternative approaches to, and defenses of, professional codes of ethics; understanding issues related to objectivity and the different roles of professionals.

In terms of ethical reasoning skills, students may be expected to understand moral dilemmas; to anticipate, analyze, and evaluate natural resource issues; to explain the ecological, economic, and social consequences of natural resource actions at various scales and over time; to present ethical arguments for and against different contemporary land uses; to be able to define, develop, explain, and evaluate your own beliefs, values, and behavior; to evaluate the impact and effectiveness of policies; to examine influences of social, disciplinary, and institutional culture on personal and professional values; to explore the influences of values and institutional mandates on the treatment of natural resource issues; and to apply ecological information in the management of forest ecosystems.

Students also may be expected to understand the sociological and historical roots of values, beliefs, and ethical traditions. For example, specific course objectives include becoming aware of the historical background of environmentalism; the history, scope, and applications of environmental ethics debates; the cross-cultural differences in the role of beliefs, attitudes, ideologies, and behavior on the environment; the understanding of how individuals come to hold their values and how values influence the practical activity of different peoples.

Generally, students are expected to develop written and oral skills for the purpose of facilitating ethical reflection and deliberation among their peers as well as among other forest stakeholders. Specific course objectives include developing a written perspective on environmental and professional ethics, working with others on value-laden natural resource problems, and developing an intellectual community among their peers.

Discussion

Results. Results from our survey show that most accredited undergraduate and graduate forestry programs teach ethics in their curriculum informally and do not consider the literature that is available from environmental ethics and history. The few programs that offer a full ethics course, however, tend to focus mostly on different theories of environmental ethics applicable to forestry. These results indicate that forestry ethics is not consistently and coherently covered in forestry curricula; i.e., teaching ethics in an ad hoc manner or focusing strictly on environmental ethics does little to provide foresters with much needed skills in practical reasoning. In other words, students may or may not learn how to evaluate the facts, evidence, and assumptions that shape ethical arguments in forestry. To do this requires a framework for teaching ethics that contends with the current meaning and value of forests, historic debates of proper forest management, and sound ethical arguments to support personal and professional answers to the question, “What are forests for?”

A Framework for Teaching Forestry Ethics. Professional foresters require practical wisdom to act for the good of people (the public and private interests) and for the good of the forest. Aristotle defines practical wisdom “as the virtue by which one deliberates well: i.e., reasons well in a practical way.” (Broadie 1991, 179). Aristotle’s notion of practical reason requires three main elements: (1) an understanding of the particular circumstances affecting a decision, (2) an understanding of ethical theories, and (3) practical experience in decisionmaking (Hughes 2001). Thus, forester’s acts should be decided with a firm grasp not only of professional obligations toward humans (professional ethics) but also what is the right relationship to forests (environmental ethics).

The third element, practical experience, is more problematic to obtain within a 4-year program in forestry. How would young professional foresters know what forests are for when they have hardly any long-term experience? How would they know how to avoid some of the pitfalls of the profession, i.e., institutional mandates that conflict with public values, ecological knowledge, economic efficiency, and cultural worldviews? We argue that forest history with its in-depth case studies and broad stroke depictions of past forest management decisions would provide at least a surrogate for lived experience as well as provide a necessary longer-term perspective of what forests are for.

In the following section we provide a forestry ethics course template that is available for institutional customization depending on the circumstances at the institution in question.

Tripartite Forestry Ethics Course

Professional Ethics. Professional foresters should understand the ethics code of
their profession to maintain their professional credibility, legitimacy, and morality. Professional ethics traditionally include topics such as the appropriate scope of professional services; the specification of fees and publicity; conflicts of interests between clients; and obligations to clients, the profession and third parties.

Topics to be discussed include the following:

- Professional standards, principles, and rules (excerpt from Bayles [1981]). We use Bayles’ Professional Ethics because of its clear description and discussion of professional obligations.
- Codes of ethics (excerpt from List [2000]). List’s book, Environmental Ethics and Forestry, provides several examples of codes of ethics for natural resource professionals as well as critiques of codes of ethics for professional foresters. It also offers a wide range of articles on professional ethics and environmental ethics in forestry as well as other relevant materials.
- Conflicts with third parties (entire book of Applbaum [1999]). Ethics for Adversaries provides a critical analysis of professional relationships and critiques the view that professional duties may be used to set aside the requirements of ordinary morality.
- Cases (excerpts from Irland [1994]). Ethics in Forestry offers several articles on professional ethics, business ethics, environmental ethics, and public service and policy.

Suggested additional readings include Callahan [1988], List [2000], and Martin [2000].

Environmental Ethics. Although professional ethics typically have been the main and/or sole topic of discussion in forestry ethics, they do not provide practitioners with the theoretical guidance they need to make moral decisions about forest management. The following is an outline that covers many of the main issues in this field.

Antropocentric Utilitarianism and Its Progeny.—Topics to be discussed include the following:

- Utilitarianism (entire book of Mill [1859]). Because of its foundational impact on forest management and conservation policy in America.
- Pinchot, The Training of a Forester.
- Scott, Seeing Like a State (Chapter 1). A critique of centralized government control of resources, using forestry as an example.

Economic valuations of natural resources (and their ethical implications; Harris [2002] and Tietenberg [2002]).

Suggested additional readings include Hotelling [1931], Hays [1959], Daly [1993], Brown [1994], and Sagoff [2004].

Going with Nature’s Flow?—Although Pinchot has had an enduring effect on North American forest management and conservation policy, Leopold’s A Sand County Almanac provides an ethical foundation of the ecosystem management paradigm.

Topics to be discussed include the following:

- Leopold’s A Sand County Almanac (entire book of Leopold [1966]). We also suggest contemporary critiques of Leopold in the following articles: “Thinking Like a Chicken” from Adams and Donovan [1999] and “Hoping Against Hope: Environmental Justice in the Twenty-First Century” from Mutz [2002].
- New forestry and ecosystem management (excerpt from Boyce and Haney [1997]). This discussion sets the stage for the next topic: adaptive forest management.
- Adaptive management (as a safeguard against ecological hubris; Walters and Holling [1990] and Gunderson and Holling [2002]).

Suggested additional readings include Walters [1986], Gunderson et al. [1990], Christensen et al. [1996], Callicott [1999], and Yaffee [1999].

From Dominion to Partnership.—Other more recent environmental ethics e.g., biocentrism, ecofeminism, deep ecology, and environmental justice, present important challenges to the former ethics. Knowledge of these radical environmental ethics provides a critical and comprehensive understanding of human/nature relationships, which would better contextualize decision-making.

Topics to be discussed include the following:

- Reverence for Life, Albert Schweitzer, “An Ethnic of Reverence for Life” from A Philosophy of Civilization (Schweitzer 1923), and Brown’s “Are there any natural resources?” (Brown 2004).
- Ecofeminism. Reinventing Eden (entire book of Merchant [2004]). This book argues that our attitudes toward nature and women are dysfunctional.

- Deep ecology (Guha 1994, Drennen and Taylor 1997). The deep ecology movement has gained ascendency since its inception in 1972. It forms the basis of ecoforestry, a soft-touch forest management paradigm in forestry. Guha’s article provides an important argument against the first world’s large consumption rates and wilderness preservation.

- Environmental justice (excerpts from Mutz [2002]). The last topic of this section unites all topics discussed so far: the inter-connection between social and environmental injustices perpetuated by state-controlled, utilitarian, and economics-driven forest management practice and policy.

Suggested additional readings include Devall and Sessions [1985], Zerner [2000], Shadrer-Frechette [2002].

History as a Precursor to Judgment. —There are few recent case studies critically examining the environmental ethics of forest management. This is not surprising given that environmental ethics is mostly an academic discipline —ethicists are not typically part of the environmental and forest management planning and decisionmaking team. Current case studies, however, would help practitioners solve particular ethical dilemmas by providing a surrogate for lived experience. Thus, we suggest that foresters critically examine cases of current ethical issues in forestry. Several volumes are available that provide and critically assess current environmental ethics case studies (Shadrer-Frechette and McCoy 1993, Gladwin et al. 1996, Newton et al. 2005). There is also literature that is specifically focused on environmental ethics in forestry (Irland 1994, Coufal and Spuches 1995a, Davradou and Namkoong 2001).

Forest history provides students with experience gained from past forest management decisions and policies (Williams 1989, Perlin 1991, Harrison 1992, Schama 1995, Guha 2000). We suggest the use of a case study such as Nancy Langston’s Forest Dreams, Forest Nightmares (Langston 1995, 2005) in which historical analysis of the cultural, economic, ecological, and other factors that shaped forest management in the past could be critically evaluated in terms of the ethical topics discussed earlier; for instance, professional obligations to third parties, Pinchot and utilitarian-based forest
management, uncertainty, and ecosystem management.

**Conclusion**

The survey we conducted to ascertain the degree of formal training in ethics offered to Canadian and American professional foresters and natural resource managers and technicians, indicates that forestry ethics is not consistently and coherently covered in forestry curricula. Teaching professional ethics in an ad hoc manner or focusing strictly on environmental ethics does little to provide foresters with much needed skills in practical reasoning in the context of forestry, i.e., making wise decisions about how we should manage forests. Our approach does not preclude the inclusion of ethics modules within other forestry courses, but it highlights the need for forestry students and faculty members to engage in a sustained and thorough (theoretical and applied) examination of the ethical issues they are likely to encounter in their practice.

We propose a framework for teaching forestry ethics based on practical reasoning. We argue that professional codes of ethics must be supplemented by environmental ethics and forest history. Environmental ethics offers a rich source of material to guide personal reflection, clarify the ethical dimensions of particular management decisions, and offers tools to facilitate normative discourse. However, they lack an integrated consideration of what actually happens. Forest history with its in-depth case studies and broad stroke depictions of past forest management decisions provides a surrogate for lived experience and a long-term perspective.

Although the proposed course is designed for senior students, we believe that an early introduction to forestry ethics using a historical case study as a foundation to discuss professional and environmental ethics should be included in the forestry curriculum. This could be done within an introduction to forestry course or as a single credit course in the first year of the forestry program. Moreover, given the extensive amount of readings in the proposed senior forestry ethics course, we suggest an evaluation scheme that would compel students to do the readings diligently, such as frequent quizzes or short essays on the reading material.

We hope that incorporation of these issues in the training of foresters will increase our understanding, in the profession and public alike, of what our planet’s forests are for.


