

September 1987

## Environmental Ethics for Engineers

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### Recommended Citation

R. J. Piaggione, *Environmental Ethics for Engineers*, 5 Pace Env'tl. L. Rev. 333 (1987)

Available at: <https://digitalcommons.pace.edu/pelr/vol5/iss1/11>

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## BOOK REVIEW

### Environmental Ethics for Engineers

By Alastair S. Gunn and P. Aarne Vesilind. Lewis Publishers, Inc. 1986. Pp. 149. \$18.95 (hardcover); \$13.95 (softcover).

At first glance one would suspect that this work offers little interest to a law student or lawyer. The title hints of a comprehensive ethical guideline for engineers involved in projects that have an impact upon the environment. In fact, this treatise attempts to explore the rudiments of ethics and how they could and should influence mankind's attitude toward the environment. As such, the work is of interest to anyone interested in the environment, especially the environmental attorney.

The fact is, be it engineer or attorney, many professionals regard environmental problems as purely technical challenges. The secondary impacts of decisions upon the environment are ignored for the sake of solving a client's dilemma. The results of such narrowly focused thinking, when taken to its extreme, can be tragic. For example, in his 1920 book, *Permitting the Destruction of Unworthy Life*, Dr. Alfred Hoche, who was one of Nazi Germany's mentors declared: "We ask, openly, are there human lives which have no value to society or to their bearer?"<sup>1</sup> This finds its roots in the concept of finding solutions without considering the inherent value of human life. In the same fashion should we today consider the inherent value of the rest of our environment?

This book is authored by Alastair S. Gunn, a lecturer of

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1. A. Hoche, *Permitting the Destruction of Unworthy Life* (1920).

philosophy at the University of Waikato, New Zealand, and P. Aarne Vesilind, Chairman of the Department of Civil and Environmental Engineering at Duke University, North Carolina. As diverse as the authors' backgrounds are, they have paradoxically produced a book with an underlying unidirectional current. While not directly expressing their solution as some scholars prefer to do in examining philosophical questions, the authors strongly suggest the direction in which they believe mankind, not just engineers, should be going. Basically, the authors believe that the conduct of mankind, especially principled professionals, should be guided by the universal rules of fairness and justice (apparently as perceived by the authors). Translated into applicable terms for society, the authors believe that we should be extending our social consciousness from people to our environment as a whole, or, in less pretentious terms: "rocks and trees have rights, too."<sup>2</sup> As evidenced by some subsequent writings, this concept is not new but obtained public awareness and credence during the late '60's youth movements.

What is interesting about the book is how the authors reach their version of "fauna chauvinism." The book is divided into three parts, Fundamentals, Readings and Case Studies, and Appendix. Part One takes a very fundamental approach to the philosophy of man's conduct, exploring the various evolutionary stages of environmental ethics. The reader is exposed to different methods of examining environmental topics. In doing so, one cannot help but examine one's own attitude towards the environment. These discussions, which are unfortunately too brief, coupled with the reader's self-examination, can produce that broadening of understanding which ethics is designed to do. In this respect, the authors are effective in accomplishing their goal.

Acknowledging the intrinsic value of nature is perceived by the authors as the logical culmination of the philosophical maturation of man. As man acknowledged the intrinsic value of human life, it abolished slavery (and to some degree sexism

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2. See, *Sierra Club v. Morton*, 405 U.S. 727 (1972)(Douglas, J., dissenting).

and racism), a concept generally accepted less than one hundred and fifty years ago. Man has begun to recognize the intrinsic value of animals — or at least their ability to suffer — a concept which was generally unheard of less than a hundred years ago. It is just a matter of time, the authors imply, before the concept that plants and even inanimate objects are recognized as having a right to exist.<sup>3</sup>

The authors point to the now slightly dated section 102 of the National Environmental Policy Act (NEPA)<sup>4</sup> as an attempt by Congress to force engineers into addressing the effects of their projects upon the environment. Section 102 mandated the preparation of Environmental Impact Statements (EIS) for the first time. However, the authors recognize the many gaps and areas of an EIS which are subject to manipulation. Most people familiar with the process acknowledge that the data placed in the EIS can be molded to reach any desired conclusion. Thus the EIS becomes nothing more than another tool for solving the client's problem rather than addressing the environmental impact of the solution. For the most part, the EIS only accomplishes the goals Congress intended when another organized adversary challenges the EIS in question. The real solution, the authors conclude, is in the education of engineers.<sup>5</sup> If engineers are sensitized to the broader social values in their educational process, then environmental ethics will be infused in engineering decision making from the inception.

The second part of the book consists of various excerpts and case studies. The readings can be somewhat disjointed and supercilious (such as *The Existential Pleasures of Engineering*).<sup>6</sup> However, some concepts are driven home with tragic clarity. For example, the lamentable environmental impact caused by a decision driven by personal/corporate greed and vanity is most effectively articulated. The articles, *Trag-*

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3. A. Gunn & P. Vesilind, *Environmental Ethics for Engineers* 129 (1986).

4. 42 U.S.C. §§ 4321-70a (1982 & Supp. III 1985).

5. A. Gunn & P. Vesilind, *supra* note 3, at 38.

6. *Id.* at 91.

*edy of the Commons*,<sup>7</sup> *The Kepone Tragedy*,<sup>8</sup> *The Hooker Memos*,<sup>9</sup> and *Decision Making in the Corps of Engineers: The B. Everett Jordan Lake and Dam*<sup>10</sup> are pithy examples of the willingness of people to sacrifice the environment for their personal agenda.

The Appendix consists of a Code of Ethics drafted by the American Society of Civil Engineers<sup>11</sup> and a chapter entitled "Primer on Ethical Theories."<sup>12</sup> Strangely enough, it is in the last paragraph of the Appendix that the viewpoint of the authors is most clearly expressed. It reads:

The duty of a professional engineer thus goes beyond pursuing his or her own career and giving satisfaction to employer or client. The ethical engineer, in respecting the rights of others and the interest of the community (ultimately all humanity), will not advance his or her career at the expense of client, employer or community. Nor, we suggest, should the interests of client or employer be put above those of the society at large which, after all, makes possible the practice of engineering and for whose benefit it ought to be practiced. And finally, the ethical engineer must take personal moral responsibility for his or her actions. To live ethically is thus to have self-esteem; to feel proud of oneself for doing what is *right*.<sup>13</sup>

In the final analysis, the brevity of the book, if expressed on an ethical plane, is both its strength and its weakness. The subject matter is much too large to be adequately covered in the manner chosen by the authors. One suspects the authors were unwilling to probe deeper into their subjects to avoid losing the readers the book was targeted for: engineers. In that respect the book is effective since it provides environmental engineers with a primer or starting off point for further ethi-

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7. *Id.* at 55.

8. *Id.* at 63.

9. *Id.* at 73.

10. *Id.* at 101.

11. *Id.* at 132.

12. *Id.* at 137.

13. *Id.* at 149.

cal exploration. It does not, however, provide the engineer with what the title seems to hint at, namely, guidelines for addressing environmental engineering ethical problems.

Another failure of the book is that the authors do not really place enough emphasis on the fact that ethics is not usually a black and white issue. Most engineers, based upon their scientific training, would suspect that all problems lend themselves to a dispositive solution or formula. The fallacy of this approach is evident by the recent phenomenon of bioethics which has tried to rationalize when life should be terminated. Such guidelines become, in effect, a secular religion determining the value of life itself. Not to clearly address that issue may be misleading.

If taken as a starting point in environmental ethics education, the authors provide a good quick study of the issues, useful for all professionals. As such, this book is highly recommended for attorneys as well as engineers engaged in the environmental field.

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