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Deep Ecology Clarified: A Few Fallacies and Misconcep-

tions

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DISCUSSIONS OF DEEP ECOLOGY, WHILE widespread throughout the environmental philosophy literature, are often suffused with misconceptions and misunderstandings. Some of these are relatively trivial, but others, unfortunately, are quite serious. These more serious errors in interpretation have often resulted in misrepresentation and distortion of the deep ecology approach (DEA). The purposes of this discussion are to outline several of the misconceptions, suggest some possible reasons for their prevalence, and offer an alternative, hopefully clarifying, interpretation of the DEA.

People seem either to feel at home with deep ecology (are sympathetic to the search for "root" causes, efforts to articulate one's total view, Naess and Session's "deep ecology platform," etc.) or they tend to feel antipathy towards it. A situation has emerged where supporters frequently neglect to give deep ecology a critical eye, while foes often fail to give it a receptive ear.

While some may argue about whether Naess should be considered as the "father" of deep ecology, he is undeniably responsible for the interpretation of deep ecology that I consider here. A host of expositions and criticisms of deep ecology (or elements of it) have been put forth.1 Many of these contain careful and coherent analyses. Even some of these, however, are hindered by one or more forms of four weaknesses common to discussions of deep ecology.2 My purpose in raising these "weaknesses" is not to criticize particular authors, but rather to call attention to the dearth of accessible, thorough, and balanced treatments of Naess's DEA.

The first weakness consists of building expository discussions upon relatively unsophisticated reasoning. Examples range from seemingly rote acceptance or repetition of Naess's most popular writings to naive, sometimes misleading, portrayals of Naess's ideas. A common instance is the unfortunate use of the term "deep ecologists" for supporters or theoreticians of the deep ecology movement. While at first glance this seems like a relatively trivial use of shorthand, it has significant semantic implications, the most serious of which is that it implicitly suggests the existence of a counterpart to "deep ecologists," namely "shallow ecologists." This is an assertion Naess never intended to make and many times has counseled against. His use of the depth metaphor, following Kierkegaard, was directed at our level of problematizing.3 Its purpose is to draw attention to the need for publicly questioning all of the practices, policies, values, and assumptions that propel the ecological crisis.

A second, quite common shortcoming results from drawing inferences from a scanty, selective, or dated reading of the literature or unmindful subtextual analyses. The broad range, depth, volume, and evolutionary nature of Naess's philosophical writings demand a particularly labor intensive commitment to comprehensive analysis. Naess's many unpublished papers and tendency to revise, revise, and re-revise make this weakness difficult to avoid even with a commitment to thoroughpaced analysis. Examples of the selective reading weakness include assertions that deep ecology is inherently anti-humanist or anti-feminist because the deep ecology platform and the vast majority of deep ecology writings fail to make explicit reference to the oppression of women and the general domination of some humans by other humans. The deep ecology movement has as its primary focus the reversal of the ecological crisis; this focus in no way precludes or undermines the overlapping concerns of the peace and social justice movements. The deep ecology approach is consistent with many possible interpretations of and responses to the roots and origins of the ecological crisis.

The third, and perhaps most significant weakness, may result from a compounding of the two previous shortcomings, but is not necessarily derivative of them. It arises from incorporating critical misconceptions and methodological or logical fallacies. Five examples of misconceptions include: (1) equating ecocentrism with misanthropy, (2) identifying "Self-realization!," the fundamental norm of Naess's personal Ecosophy T, or "biospherical egalitarianism in principle" as singular fundamental norms of deep ecology, (3) isolating the deep ecology platform (DEP) as the "heart" of deep ecology or dismissing it as "non-distinctive" without considering the gestalt nature of the DEA and its emphasis upon total views, (4) pinpointing the genealogy of deep ecology in a stoic attempt to overcome the alienation resulting from the tragic loss of free nature as opposed to a Pyrrhonian sceptic's ataraxia,4 questioning of technological optimism, economic rationality, the costs associated with loss of biodiversity, etc., and concern with how to live "rightly," with virtue and simplicity, and (5) associating Naess's use of "depth" with the level of an individual's willingness to reject anthropocentrism as opposed to raising and taking seriously the search for fundamental causes and the consideration of radical responses.

Five examples of methodological or logical flaws have included: (1) assuming that extension of care and concern to non-humans necessarily implies reducing care for humans, (2) presuming that discussions of population reduction imply draconian measures as opposed to long-term, slow reduction over centuries, (3) surmising that acceptance of 'non-instrumental' or 'objective' intrinsic value5 necessarily implies equal moral standing and treatment for such entities, (4) inferring that acceptance of intrinsic value necessitates acceptance of moral monism, and (5) positing that because the DEA identifies with nature as a gestalt with 'objective' intrinsic value and because it sees humanity as a part of nature that whatever humans do necessarily furthers nature's interests.

The final form of weakness is represented by the few disingenuous attempts at critical analyses that seek to set-up deep ecology as a "straw man." These efforts, which often make use of the previously discussed examples, undertake to dismiss deep ecology and its contributions by demonstrating that it has fatal flaws. While some of the other weaknesses are more subtle, and thus insidious, these undertakings are usually "hatchet jobs" with transparent ulterior motives.

This brief review of weaknesses associated with the interpretation and exposition of deep ecology highlights the general absence of accessible, thorough, and balanced treatments of Naess's DEA.6 One possible explanation for this scarcity rests in the difficulty of tracing Naess's own meanings. Following the zetetic sceptic tradition he eschews dogma by asserting that his own work is searching, "on the way;" it is necessarily fragmentary and ever amenable to improvements, modifications, and elaborations.7 Naess's liberal revisions at times, however, make it truly difficult to pin down his interpretation of particular elements of the DEA.8

Additional difficulty in tracing Naess's meanings may result from his philosophical commitment to vagueness as a tool for encouraging widespread acceptance of the DEA.9 "Methodological vagueness" is a sophisticated semantic device for facilitating the acceptance and agreement of statements and notions by emphasizing the positive aspect of ambiguity that is sometimes associated with a high level of generalization. Naess maintains that this device, by leaving open issues of an inconsequential nature, acts to facilitate communication and agreement on the consequential ones. One can readily appreciate the pragmatic merits of e-liminating *irrelevant* and contentious details. However, one cannot help but also wonder if in the process of practical decision-making *relevant*, but contentious details might be glossed over.

While Naess's sincerity, depth of intention, and intellectual integrity are beyond question, the propriety of emphasizing methodological vagueness raises some concern. Methodological vagueness has a antipodal side. As Naess himself has recognized, it can be employed to obfuscate conflicts as with discussions that fail to point out the oxymoronic nature of the term "sustainable development." 10 As high level goals, sustainability and development (in the sense of access to health care, food, shelter, clean water, education, and free nature, etc.) are admirable and certainly worthy of advocating, but coupled they tend to belie links to neoclassical welfare economics and the underlying conflicts between ecological sustainability and perpetual economic growth. Because the border separating issues of a consequential and an inconsequential nature is amorphous and subjective, as well as quite wide, the use of methodological vagueness can introduce a tension between parallel efforts designed to isolate and clarify fundamental conflicts (deep questioning). There is a tradeoff between the benefits associated with positive expressions of ambiguity and the costs associated with its capacity for exploitation or potential for generating further confusion.

Failing to directly address "border" issues, like whether or not privileged onto-

logical perceptions of nature exist, may only beg further speculation, confusion, and misconception. In order to fully reap the benefits of methodological vagueness, readers must be made aware that it has been employed both with deliberation and without attempt to obfuscate. The end result, otherwise, may be to turn away some possible supporters who eschew vagueness or, worse yet, wonder if the technique is being employed to avoid the asperities of deeper analyses.

Also central to the DEA, is Naess's emphasis and insistence on radical pluralism. Naess, convinced that a successful response to the ecological crisis demands a diversity of perspectives, approaches and lifestyles, imposes a minimum of external constraints while encouraging individuals to develop their own, critically thought-out total views. By offering little guidance as to whether acceptance or rejection of particular norms or hypotheses is mandatory, this approach, however, also tends to stimulate further confusion over, and criticism of, the DEA. This leads some to believe that Naess makes it unnecessarily difficult for his readers to piece together a coherent picture of the DEA. Questions arising from the use of methodological vagueness and the insistence upon radical pluralism are bound to generate frustration; they are an inevitable consequence of efforts to comprehend Naess's writings. Multiple readings of Naess's full range of work are necessary to absorb the depth and complexity of his contribution to environmental thought and policy. Readers will, however, be well rewarded for their journey.

Presentations of the DEA as a systematic philosophical framework for supporting the development of ecologically inspired total views (as I attempt to do below) have been largely absent from other supporter's discussions of deep ecology.12 The DEA is Naess's theoretical-philosophical approach for encouraging and assisting individuals to develop ecologically responsible policies, lifestyles, and concrete decisions.13 The ontologically inspired DEA focuses upon eliminating the perception of fundamental human/environment and spiritual/physical cleavages.14 It weaves descriptive and prescriptive premises into a normative framework for melding a value system with a world view. A primary goal is to contribute towards ending the ecological crisis by helping individuals avoid pseudo-rational thinking.

The DEA should be viewed as a Gestalt where not only is the whole more than the sum of its parts, but the parts, as entities themselves, are more then **mere** parts. I take there to be six essential, concatenated elements of the DEA: (1) the unifying notion of total views, (2) the DEA as a normative-derivational system, the reasoning devices, (3) "deep questioning" and (4) "loose derivation," (5) the adoption of ultimate premises that incorporate "wide identification," and (6) the eight points of the deep ecology platform.

Naess argues that humans act as if we have systematic conceptual structures for relating to the world, total views, which integrate "our basic assumptions, our life philosophy, and our decisions in everyday life," 15 whether or not we attempt to make such structures explicit. Contending that each individual's decisions

regarding society and nature are guided by total views, Naess asserts that we should strive to clearly articulate them. While the process of articulating one's total view places significant demands upon the individual, Naess argues, that we have no choice: "The essential idea is that, as humans, we are responsible in our actions as to motivations and premises relative to any question that can be asked of us."16 The primary purpose of the DEA is to support individuals in carrying out this responsibility.

Naess characterizes the DEA as a normative-derivational system. The system-atization of the DEA is normative because it calls for a particular set of prescriptive ultimate premises. The approach is derivational by virtue of being a logical systematization, where concrete consequences "follow" from premises and hypotheses. Naess's systematization is not derivational in the traditional hypothetico-deductive sense, but derivational only in his sense of being predicated upon an identifiable reasoning process.

The description of the DEA as a normative-derivational system is a pedagogical device for elucidating Naess's process of systematically reasoning from ultimate premises to concrete consequences. The approach employs two tools. "Loose derivation" is the process of building successively more particular normhypothesis chains by working consistently from general norms and hypotheses. It is "loose" in the sense that more precise norm and hypothesis statements do not follow directly from ultimate premises; they also depend upon the character of the additional, successively more precise norms and hypotheses. The inverse process, "deep questioning," allows norm conflicts to be examined. It acts as a sort of touchstone to insure that derived consequences are consistent with each higher level norm and hypothesis. New information and insights may, at times, warrant the revision of preceding norms and premises.

The DEA rests upon the assumption that certain, very basic premises are unproven or unprovable; the deep questioning process must eventually stop. Ultimate premises or ultimate norms are the unavoidable foundations upon which all theories or generalizations are built. Because of their generality, complexity, and inherent lack of preciseness, an almost infinite variety of ultimate premises exist. Naess argues that a wide variety of them are consistent with the DEA.17 As I understand Naess, the only restriction placed upon the set of ultimate premises to insure that they are deep ecological ultimate premises is that the Deep Ecology platform (DEP) (see pp. 143-144, Ed.) be derivable from them.18 I use Naess's term, wide identification, to refer to this common element of deep ecological ultimate premises. It represents, at a minimum, an expansion of one's sphere of concern to include non-humans. It is characterized by the perception that all life is interdependent; common goals bind all living beings to the life process. In its most expansive form, wide-identification is the perception that the interests of all entities in nature (both living and non-living, ecosystems and individuals) are our own. While Naess may, in his own personal ecosophy, prefer this most expansive notion of identification, such a wide-reaching perspective is by no means necessary for acceptance of the DEP.

The DEP, which summarizes over ten years of thinking about deep ecology, was worked out and agreed upon by Arne Naess and George Sessions in 1984.19 It was intended to express "the most general and basic views" that supporters of the deep ecology movement (DEM) have in common.20 Naess points out that the DEP was not supposed to indicate common views in concrete situations.21 On the level of symbolizing a "call for ecological sustainability" the platform statements do represent the general views held by supporters of the DEM. On another level, however, the platform is in some sense, a skeleton outline of a total view and thus represents more than basic and general views. By outlining value priorities and calling for operational constraints on human behavior, the DEP acts as a filter, affecting the derivation process at all levels.

Elements two through five refer to the general process of reasoning from fundamentals to form total views. The DEP, as a synthetic product of this reasoning process, should be distinguished from it. It should be viewed as a precisation that helps to fill out the DEA by being a tentative set of guidelines for approaching the derivation of ecologically responsible concrete consequences. Individuals must scrutinize the DEP with the same deep questioning attitude that they would use to analyze other normative systematizations.

Figure 1 outlines the general process of reasoning from fundamentals to arrive at concrete consequences, a primary element of the DEA. It explicitly leaves out the DEP because it represents a particular collection of norms and hypothesis obtained by engaging in the process. For, a priori acceptance of the DEP violates the aim of the DEA; that is, it presupposes the existence of, and active engagement in, a similar process. What I am claiming is that the DEP should be distinguished from the reasoning process itself. It must be put forth, and seen, as a precisation that helps to fill out the DEA by being a tentative set of guidelines for approaching the derivation of ecologically responsible concrete consequences. Individuals should scrutinize the DEP with the same deep questioning attitude that they would use to analyze any other any collections of norms and premises. One goal of the DEA, after all, is to help individuals develop their own deep ecological total views.

Figure 1: Process Diagram of the DEA

I have deliberately not included Naess's four-level systematization 22 in the process schema because the distinctions between levels 2 and 3, general principles and more or less general consequences derived from the DEP (i.e., lifestyles), are fuzzy. As a result, to indicate this fuzziness, general principles and lifestyles are depicted as particular hypotheses and derived norms that are bracketed off within the dotted lines and the two clear boundaries, ultimate premises (our starting point) and concrete consequences (our goals). Even though the fuzzy distinction between general principles and lifestyles cannot be resolved, lucid articulation of derivation lines must, nevertheless, be maintained. The crucial

point is that norms and hypotheses must be articulated so that complete lines of derivation are readily discernible.

The process figure also draws attention to two crucial procedures for developing a total view; loose derivation and deep questioning. Figure 1 is intended to show how the two procedures work in unison, enabling individuals to arrive at a variety of concrete rules and decisions that maintain consistency with ultimate premises. As has been mentioned before, a manifold of concrete consequences can follow from this built-in pluralism. The attraction of Naess's derivational structure is that it affords a substantial degree of flexibility. Such a perspective is compatible with a variety of, sometimes dissonant, ultimate norms, including those inspired by Christian stewardship, ecofeminism, creation myths, enlightened self-interest, Buddhism, Hinduism, scientific ecology, ecological integrity, social ecology, Taylor's "Respect for Nature," 23 biospherical egalitarianism in principle, Wilson's Biophilia Hypothesis, 24 and Naess's "Self-realization!" 25 to name a few. It allows individuals to both maintain divergent fundamental premises and arrive at their own conclusions while still maintaining consistency with the goal of ecological harmony.

In closing, Naess reminds us that "we need to integrate life theory and life practice, clarify our value priorities, distinguish life quality from mere standard of life, and contribute in our own way to diminish unsustainability." 26 This quotation marries Naess's eudaemonic concern with his zetetic sceptic's response to the inherent vagueness of the sustainability notion. Here is where the logic of the DEA shines; society may never agree upon a satisfactory definition of "sustainability," but clear cases of unsustainability can be observed. These should be sought out and redressed while inquiry directed towards clarifying and elaborating the sustainability notion continues. The DEA is strongest on justification for a precautionary principle strategy that argues, in the face of ignorance and uncertainty, to preserve the existing heritage and thereby not foreclose options. It runs into some difficulty, however, in the area of how to inculcate wide-identification, and how to inspire value priorities that insure environmental protection in the face of conflicting choices and opportunities.

The DEA's focus upon praxis (individual responsibility and action) separate it from more traditionally descriptive inquiries into ecophilosophy.27 The significance of the DEA rests on its concern for practical decision-making; not in the correctness of the approach, but in its ability to help structure and focus our thinking about decision-making. Naess's DEA has provided inspiration and a secure philosophical foundation for environmental protection, much work awaits us!

Notes

1The following discursive bibliographic entry attempts to highlight a few of the more salient expositions and criticisms of deep ecology. References focusing upon or highlighting exposition of deep ecology include: Jim Cheney, "Ecology, Community and Lifestyle: An Outline of an Ecosophy (a review of)," Environmental Ethics 13 (3 1991): 263-273; Bill Devall and George Sessions, Deep Ecology: Living as if Nature Mattered. Salt Lake City: Gibbs Smith Books. 1985; Arne Naess, Ecology, Community, and Lifestyle: Outline of an Ecosophy. ed. Translated and edited by D. Rothenberg. Cambridge: Cambridge University Press, 1989; Peter Reed, "Man Apart: An Alternative to the Self-Realization Approach," Environmental Ethics 11 (1989): 53-69; Peter Reed and David Rothenberg, ed., Wisdom and the Open Air: The Norwegian Roots of Deep Ecology (Minneapolis, MN: University of Minnesota Press, 1993); David Rothenberg, "A Platform of Deep Ecology," Environmentalist 7 (1987): 185-190, David Rothenberg, I. It Painful To Think: Conversations with Arne Naess. Minneapolis, MN: University of Minnesota Press, 1993; George Sessions, ed., Deep Ecology for the Twenty-First Century. Boston: Shambhala, 1995; Warwick Fox, Toward a Transpersonal Ecology: Developing New Foundations for Environmentalism (Boston and London: Shambhala, 1990).

Books or articles where criticism or exposition of deep ecology figure centrally in the author's arguments include: Robin Attfield, "Sylvan, Fox, and Deep Ecology: A View from the Continental Shelf." Environmental Values 2 (1 1993): 21-32; Steve Chase, editor, Defending the Earth: A Dialogue Between Murray Bookchin and Dave Foreman (Boston: A Learning Alliance Book, 1991); Jim Cheney, "The Neo-Stoicism of Radical Environmentalism." Environmental Ethics 11 (Winter 1989): 293-325; Al Gore, Earth in the Balance: Ecology and the Human Spirit (New York: Houghton Mifflin, 1992); Ramachandra Guha, "Radical Environmentalism and Wilderness Preservation: A Third World Critique." Environmental Ethics 11 (1 1989): 71-83; Andrew McLaughlin, Regarding Nature: Industrialism and Deep Ecology (Albany, New York: State University of New York, 1993); Freya Mathews, "Relating to Nature: Deep Ecology or Ecofeminism?" The Trumpeter 11 (4 1994): 159-166; Charles T. Rubin, The Green Crusade: Rethinking the Roots of Environmentalism. New York: Free Press, 1994; Richard A. Watson, "Misanthropy, Humanity, and the Eco-Warriors." Environmental Ethic s 14 (1 1992): 95; Michael E. Zimmerman, "Rethinking the Heidegger-Deep Ecology Relationship." Environmental Ethics 15 (3 1993): 195-224; and Michael E. Zimmerman, Contesting Earth's Future: Radical Ecology and Postmodernity. Berkeley: University of California Press, 1994.

Criticisms centered on deep ecology include: Murray Bookchin, "Social Ecology Versus 'Deep Ecology': A Challenge for the Ecology Movement." *Green Perspectives: Newsletter of the Green Program Project* (Summer 1987):1-23, 11, and 23; George Bradford, "How Deep is Deep Ecology." *Fifth Estate* (Fall

1987):5-30; William Grey, "A Critique of Deep Ecology." Journal of Applied Philosophy 3 (1986): 211-216; Ariel Salleh, "The Ecofeminism/Deep Ecology Debate." Environmental Ethics 14 (3 1992):195-216; Ariel Salleh, "Class, Race, and Gender Discourse in the Ecofeminism/Deep Ecology Debate." Environmental Ethics 15 (3 1993): 225-244; Skolimowski, Henryk. "Eco-Philosophy and Deep Ecology." The Ecologist 18 (4/5 1988): 124-127; Richard Sylvan (formerly Routley), "A Critique of Deep Ecology (Part I)." Radical Philosophy 40 (1985): 2-12; Richard Sylvan (formerly Routley), "A Critique of Deep Ecology (Part II)." Radical Philosophy 41 (1985): 10-22; and Richard Sylvan (formerly Routley), "A Critique of (Wild) Western Deep Ecology: A Response to Warwick Fox's Response to an Earlier Critique." unpublished manuscript (1990?): 57 pages; Watson, Richard A, "A Critique of Anti-Anthropocentric Biocentricism." Environmental Ethics 5 (1983): 245-256; Watson, Richard A, "Misanthropy, Humanity, and the Eco-Warriors." Environmental Ethics 14 (1 1992):95. The most exhaustive compilation of criticisms of deep ecology that I am aware of appears in (Fox, 1990: pp. 45-50).

2This explication of "weaknesses" common to discussions of deep ecology draws from the references cited in note 1.

3For a discussion of Naess's use of the "depth metaphor" see, Harold Glasser, "The Deep Ecology Approach and Environmental Policy." *Inquiry* (invited submission for a special edition, under review) (February, 1995): 37 pages.

4Ataraxia is the absence of fanaticism concerning matters that cannot be proved and the tranquility of mind that follows from such an acknowledgement.

5For an instructive characterization of three different forms of 'intrinsic value' see, J. O'Neil, "The Varieties of Intrinsic Value." The Monist 75 (2 1992):119-137. O'Neil makes an important distinction between the value that can be associated with objects that are ends in themselves (non-instrumental) and the value that an object itself possesses independently of the valuations of valuers (objective). He alerts us to the relative independence between meta-ethical commitments and ethical ones.

6It is only this year, 1995, that the first thoroughgoing anthologies representing the deep ecology movement theoreticians and supporter's work have appeared; See, George Sessions ed., Deep Ecology for the Twenty-First Century. Boston: Shambhala, 1995; and Alan Drengson & Yuichi Inoue (editors), The Deep Ecology Movement: An Introductory Anthology, North Atlantic Books, Berkeley, CA.

7Arne Naess, "How My Philosophy Seemed to Develop." In *Philosophers on Their Own Work*, ed. Andre Mercier and Maja Svilar. 209-226. 10. Bern: Peter Lang, 1983.

8Recent confusion over the most current and up-to-date version of the DEP and

its elaborations testify to this matter.

9Naess and Rothenberg, 1989, pp. 42-3.

10See Arne Naess, "Sustainable Development and Deep Ecology." In Ethics of Environment and Development: Global Challenge, International Response, ed. R.J. Engel and J.G. Engel. 87-96. Tucson, AZ: The University of Arizona Press, 1990a and Arne Naess, "Sustainability! The Integral Approach." In Conservation of Biodiversity for Sustainable Development, ed. O.T. Sandlund, K. Hindar, and A.H.D. Brown. 303-310. Oslo: Scandinavian University Press, 1992a.

11For the discussion of the DEA, this article draws liberally from Glasser, 1995: pp. 5-17.

12See Sessions, 1995; Fox, 1990; Zimmerman, 1994; and Manes, 1990, pp. 139-50, interpretations of deep ecology. See also Chase, 1991, for a chronicle of Bookchin and Foreman's debate over the meanings and distinctions between deep ecology and social ecology. Both Manes and Foreman fail to present a complete and coherent picture of the DEA. The misdirected criticism of the DEA, from Bookchin, Gore, and others, may originate, at least in part, from this absence of thoroughness and clarity.

13I discuss the DEA, not Naess's personal ecosophy (Ecosophy T) formed by applying the DEA or the deep ecology movement, the loose group of individuals who espouse support of the deep ecology platform.

14Arne Naess, "From Ecology to Ecosophy, From Science to Wisdom." unpublished manuscript (1987):2.

15Arne Naess, "The Basics of Deep Ecology." Resurgence 126 (1988): 6.

16Naess and Rothenberg, 1989, p. 38.

17Arne Naess, "The Deep Ecology Movement: Some Philosophical Aspects." *Philosophical Inquiry* 8 (1986):10-31.

18This discussion was inspired, in part, by Naess's response to a question on the role of wide-identification in acceptance of the DEP (personal communication, 5/4/94).

19Devall and Sessions, 1985, p. 69.

20Naess and Rothenberg, 1989, p. 28.

21Naess and Rothenberg, 1989, p. 28.

22Naess (1986):23.

23Paul W. Taylor, Respect for Nature: A Theory of Environmental Ethics.

Princeton, New Jersey: Princeton University Press, 1986.

24See, E.O. Wilson, *Biophilia*. Cambridge, Massachusetts: Harvard University Press, 1984 and Stephen R. Kellert and E.O. Wilson, ed., *The Biophilia Hypothesis*. Washington, D.C.: Island Press, 1993.

25See Arne Naess, "A Place of Joy in a World of Fact." The North American Review (Summer 1973b): 53-57, reprinted in Sessions, 1995, pp. 249-258; Naess, "Self-Realization: An Ecological Approach to Being in the World" (Keith Roby Memorial Lecture, March 12, 1986a), reprinted in Sessions, 1995, pp. 225-239; and Naess and Rothenberg, 1989.

26Naess, Arne. "Sustainability! The Integral Approach." In Conservation of Biodiversity for Sustainable Development, ed. O.T. Sandlund, K. Hindar, and A.H.D. Brown (Oslo: Scandinavian University Press, 1992a), p. 303.

27Naess and Rothenberg, 1989, pp. 36-8.

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