

Long Dissertation Abstract

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As the scientific understanding and the social impact of ecology develop, our understanding of the scope and nature of moral value within the natural world is more relevant than ever. Theories of inherent moral worth for environmental ethics can play an important role in guiding future considerations on policy and action in the world, both made more urgent by consistently-growing concern over human impact on that environment. Yet, contemporary theories of inherent moral value that ground environmental ethics are inadequate for at least one of two reasons: either they fail to offer a sufficient scope, or they fail to offer justification sufficient for application in policy and practice. In this dissertation I first present a critical taxonomy of contemporary theories of inherent environmental value, the value something has in and of itself and apart from its usefulness to others, to frame the field of environmental ethics. Much of the early effort in environmental ethics was directed toward explaining our moral obligation to natural systems – environmental wholes – by seeking out what J. Baird Callicott once called “the Holy Grail of environmental ethics – the coherent, inclusive super-theory.”¹ Recently, there has been a turn toward still inclusive but also pluralistic approaches. Yet these approaches too tend to prioritize justification of the inherent moral worth of environmental wholes over that of individuals: species over members, forests over trees, ecosystems over living systems. Instead of such holistic approaches to environmental value supporting the value of the system over the value of its member parts, the approach I take is individualistic, following a progression of the extension of moral value from sentient nonhuman animals to all living things. This approach develops a biosemiotic theory of meaning that explains moral value as a function of the wide networks of representation and interpretation by individual living things. As such, it is an exploration of an *ecological ethic*; that is, a theory of environmental value grounded in science that accounts for the value of individual life in terms of its interrelations. The shift to such ecological considerations is quickly developing within environmental ethics, and this dissertation directly addresses this shift in a promising new way.

One might see the picture I paint in this dissertation as taking the shape of a tree. The crown of that tree, the branches and leaves in this picture, are drawn from the history of thought on environmental value. At their extremities, they describe approaches based on spiritual and transcendent cosmologies, ranging from Native American to Biblical to more contemporary Christian. Closer to the trunk, these branches of thought describe early immanent approaches to environmental value, grounded in moral intuitions developed out of growing scientific knowledge of the natural world, including those of Arne Naess, James Lovelock, and Aldo Leopold. All these approaches reach out with wide scopes of valuation, proposing ways we might account for the value of all things in the natural world. But these leaves and frail

¹ Callicott, J. Baird. (1990). “The Case Against Moral Pluralism.” *Environmental Ethics*. 12, 100.



branches remain unsteady in the hot air (to mix metaphors) blown by philosophers seeking coherence, consistency, and sufficient justification in ethical theories. The trunk of this tree-shaped picture I paint is made up of approaches to environmental value that are strong and focused but much narrower than their leafy counterparts. Here I evaluate theories of moral value based on language, social contract, consciousness, rationality, and sentience. Approaches like these, strong in the contemporary literature concerning human and nonhuman moral value, have stronger justification: they are supported by scientific knowledge and our best understanding of the natural world. But they have narrower scope that restricts their suitability as approaches to environmental value that are sufficient to describe the full range of moral value in the natural world. The roots in this picture are made up of approaches that are both strong and broad, reaching as far if not farther than the accounts that make up the crown of this tree-shaped study. Approaches here must have strong scientific justification as well as a scope that accounts for the full range of inherent value in the natural environment. The development of theoretical models of moral value at this level is still nascent. So in support of its further development, I propose a novel approach to environmental value based in biosemiotics, the study of signification in living systems. Biosemiotics has the potential to offer a scientific description of meaning that can extend moral consideration to all living things.

In an extended preface to this project, I walk carefully through the historical development of environmentalism and environmental ethics in an effort to frame the importance of the considerations to follow. In the first chapter, I explore Native American approaches to environmental value. I argue that, while problems of historicity get in the way of a clear historical perspective, we can draw out common themes across the diverse tribal and cultural views. Key among these themes is what I describe as kinship mutuality, the view that all members of the natural world are interdependent and intimately and familiarly related. While such approaches extend the scope of moral considerability to all individuals in the natural world, they do so by relying on a spiritual justification to which it is difficult for our contemporary scientifically-minded society to relate. In the second chapter, I move to Judeo-Christian perspectives on environmental value. There, whether one takes the attitude of dominion or of stewardship, the approach can ultimately account for a narrow scope of inherent value (found in all and only human beings) and provides another spiritual unsatisfying justification. Even St. Francis of Assisi, famous for offering sermons to nonhuman animals, cannot canonize the inherent moral worth of nonhumans sufficiently. In an extension of this chapter, this same critique is applied toward the foundational work of environmental philosopher Holmes Rolston III, whose explorations lead him toward expressing value in terms of transcendent awe in the face of natural beauty. In chapter three, I turn to broader theories of moral value rooted in consciousness that have potential ground environmental value. After reviewing the extremes of panpsychism and physicalism and dismissing the them as untenable, I move to consider the perspectives of the contractualist whose views of moral worth are centered on a more moderate platform of consciousness. I develop the analyses of Peter Carruthers and Mark Rowlands, two contractualists who have considered the theory as it relates to nonhuman animals, as they might relate to the broader concerns of environmental ethics. While their analyses lead to vastly different conclusions regarding the scope of moral considerability,



Carruthers and Rowlands agree that the contractualist project, despite strong and developing empirical justification, has no space for consideration of the moral worth of non-sentient beings. In the fourth chapter, I consider sentience as a stronger criterion of moral considerability. Sentience-based approaches are scientifically-grounded but ultimately face too narrow a scope of value for an environmental ethic and a justification that stops at intuition. Common-sense appeals to intuition get good traction, but one only needs to think so far as the civil rights movements of the 1950's and 1960's to recognize that intuitions are constantly shifting. Just because sentience-based accounts do not ascribe inherent moral worth to the majority of living things is not a sufficient reason for us to think this majority is not due such ascription. I examine the Land Ethic of Aldo Leopold in the fifth chapter of this project as among the first efforts to provide a scientifically-grounded understanding of the moral value inherent in all parts of the natural world. Leopold's historical placement led him to spearhead the development of conservation biology as well as deeply impact environmental ethics. Leopold's efforts serve to stress the importance and difficulty of the relationships central to the contemporary debates within environmental ethics - the relationships between ecological wholes and the parts that make them up. After the critical examination in the first five chapters, I explore a novel alternative approach to environmental value in the sixth chapter. This approach centers around a relational biosemiotic account of meaning-making by living things that, I argue, has the potential to likewise constitute a morally-relevant hierarchical theory of mattering for all living things. Biosemiotics is the study of the interrelated interpretations and representations in the natural world. Via this approach, the biosemiotic ethicist proposes to extend the intuitive analogical reasoning that allows us to recognize the moral worth of other humans and some nonhuman animals to all living things. The resulting biosemiotic ethic purports to be both scientific in justification, firmly grounded in empirical research and methodology, as well as broad in scope, accounting for not only all sentient life but all life *tout court*. In the concluding chapter I explore both the limitations and the prescriptive implications of this descriptive biosemiotic theory, offering case-study examples of how such an account might guide our action regarding the natural environment and the living things that make it up. I conclude that, while the approach faces significant problems, it at least reinvigorates the conversation concerning scope and scientific justification of inherent moral value.

My dissertation evaluates ways of understanding the inherent moral worth of all living things, an essential step toward an environmental ethic. Furthermore, it enables us to better understand the implications of ecology, suggesting an essential albeit instrumental tie between the value of the living individual and the value of the nonliving world of which it is a part. While supporting continued work within environmental ethics, this project also has much broader impact. Biosemiotics provides new leverage for biologists seeking to explain directed action in nature, as well as for ecologists seeking to understand the relationships between individuals and their environments. Further, it offers conservation biologists and environmentalists new conceptual tools to frame with work for public interpretation. Such broad impact both within and external to applied ethics translates well to the classroom, where it serves my focus on student impact and development of moral reasoning.

