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The Value of Nature: Economic, Intrinsic, or Both?

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This Learned Discourse complements Doorn's (2017) in which she recounts the history of philosophical and ethical thought concerning the value of ecosystems. She notes that anthropocentrists do not acknowledge the intrinsic value of nature, but points out that environmental pragmatists acknowledge that anthropocentric approaches often lead to positive environmental results that different philosophies can agree on. Here, we argue that changing our paradigm of what leads to human well-being by considering both intrinsic and economic perspectives will be more productive than valuing ecosystems based solely on their monetary worth to people.

There has been a long standing argument that ecosystems have intrinsic value and so there is no need to put a price tag on Mother Nature (cf., McCauley 2006). And further, that it is wrong to do so. The concept of intrinsic value reflects the perspective that nature has value in its own right, independent of human uses. Intrinsic value opens us to the possibility that nature has value even if it does not directly or indirectly benefit humans. Intrinsic value is viewed from an ecocentric standpoint. Conversely, the economic concepts of use and non-use values are viewed from an anthropocentric perspective (Munns and Rea 2015). Non-use values describe the worth, typically in monetary terms, that people ascribe to ecosystem services that they do not directly or indirectly use yet view as affecting their well-being. Habitat preservation, existence value (e.g., threatened and endangered species) and bequest value (e.g., wilderness areas set aside for future generations) are examples of non-use values.

While non-use values can be quantified monetarily using economic valuation approaches, if at times imprecisely, there are no standard metrics or methods for describing the intrinsic value of ecosystems. To paraphrase Farrell (2007), our current inability to quantify the intrinsic value of the “priceless” life-supporting services of ecosystems might be due to our reliance on valuation approaches that are simply not capable of representing their economic worth. This is problematic when it comes to environmental management and decision making. Yet ironically, when people express a desire to base decisions affecting ecosystems (or their components) on intrinsic values, they may be reflecting their own (anthropocentric) non-use existence values for those ecosystems (Goulder and Kennedy 2011). Even so, intrinsic value has been the foundation of environmental management decisions, such as establishing the US National Park system.

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Sound science is foundational to risk assessment and environmental management. Assessment endpoints traditionally used in ecological risk assessment have often reflected the values of a relatively small component of society: ecologists and risk assessors. As a result, such assessments may be esoteric from the general public's perspective, thereby obscuring the transparency of decision-making. In an effort to strengthen the basis of environmental decisions, economic valuation has been used to show how human-induced changes in nature's services impact human well-being. Various tools have been used in an attempt to provide information in a way that is useful to decision makers, including life cycle analysis, ecosystem services valuation, benefit-cost analysis, and resilience analysis. These techniques are used by government and business to integrate social, economic, and environmental impacts associated with a given activity (e.g., regulation, product development). Overall, this information fosters systems thinking and sustainability, allowing decision-makers to better understand the consequences of their decisions. It also lessens the likelihood of unanticipated consequences. Yet, many of those tools involve monetization of nature principally from the anthropocentric view of human well-being.

Intrinsic and economic valuation need not be mutually exclusive; there is room for both perspectives. If we, as a species, view ourselves as part of the environment, not separate from it, then we will understand that environmental well-being leads to human well-being. This requires a shift in the current paradigms of ecocentric and anthropocentric approaches, both of which cast nature as separate from humans, in the first as an entity with its own intrinsic value, and in the second as a system that provides benefits to humans. We put forward the concept of a shared well-being that unites humans and nature through a common future. This places humans and nature on the same playing field and leads to a decision-making framework that explicitly considers both ecocentric and anthropocentric perspectives.

Clearly financial stability is important to people, yet there is more to human well-being than monetary wealth. Mental, spiritual, and social wealth are also fundamental to human well-being and fulfillment. Focusing on short-term financial outcomes rather than on long-term environmental (which includes human) well-being results in decisions and choices that have consequences for both present and future generations (e.g., sea level rise, climate impacts, nutrient pollution).

Methods for economic valuation and monetization are well developed and play critical roles in society and decision-making, while methods to quantify the intrinsic value of nature are evolving and have not reached the same level of acceptance. It currently is exceedingly difficult to quantify the full value of environmental stewardship, yet we only need to quantify enough to make well-informed decisions. Ultimately we see ourselves as environmental pragmatists (Doorn 2017) embracing ethical and valuation pluralism. By acknowledging the intrinsic value of ecosystems and protecting them for their own sake (Selck et al. 2016), human health and well-being will naturally increase. As pragmatists, our goal is to provide effective solutions to environmental problems. The challenge is to develop scientifically rigorous approaches that include both intrinsic and economic value in the calculus of environmental decision making.

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