

## Response from Justus and Maguire

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## Intrinsic Value Can Help Conservation

To undermine the worth and importance of intrinsic value, as Lynn A. Maguire and James Justus do in their Viewpoint article (*BioScience* 58: 910–911), is to undermine conservation work. They themselves recognize the importance and usefulness of intrinsic value when, referring to the Endangered Species Act, they state, “Intrinsic value may get a proposed listing to the table, but it does not muster the attention needed to get it off the table and into action.” Although intrinsic value cannot be the sole basis for conservation planning or decisionmaking, it does provide purpose and brings parties “to the table.”

Maguire and Justus’s fundamental error is the view that intrinsic value must compete with instrumental value. Their article begins by acknowledging the support for intrinsic value of “conservationists from Muir to McCauley” but doesn’t give the whole picture. The belief that nature has intrinsic value as well as and apart from its instrumental value has been discussed by writers from Leopold to Rolston. Conservationists must realize that intrinsic and extrinsic (instrumental) values are not mutually exclusive.

Maguire and Justus also maintain that when protection of a species or ecosystem conflicts with economic development or with immediate human needs, intrinsic value is even less likely to be an effective basis for conservation. This argument scapegoats intrinsic value. Because of humankind’s anthropocentrism, no basis for conservation is likely to trump immediate human needs.

In previous years, conservation has been faulted for being unable to reach the masses. More recently there have been successful partnerships for conservation between science and religion. We should be motivating people by branching out in search of ideas that complement our own, rather than forcing them to choose between concepts that are in fact compatible.

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## Letters to the Editor

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## Response from Justus and Maguire

*Mr. Espinoza has misinterpreted our view. Nowhere do we assert that intrinsic and instrumental values are incompatible, are mutually exclusive, or must compete. At one point, we do suggest that an irreconcilable tension may exist between the emotional appeal of intrinsic value and the trade-offs required by conservation decisions. Given that our argument concerns only what decisionmaking requires, Mr. Espinoza’s letter seems to illustrate this tension. We contend that instrumental value is a much more effective basis for conservation decisionmaking than intrinsic value, and we reject the pessimistic view that “humankind’s anthropocentrism” means that no basis for conservation is likely to be effective. It is also not our intention to claim that the idea of intrinsic value is worthless; our focus is the inadequacy of intrinsic value as a basis for conservation decisions. As Mr. Espinoza’s letter says, our piece alludes to the motivational nature of intrinsic value, and we explicitly mention its inspirational appeal. Of course, some instrumental values are similarly inspirational.*

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## The Tragedy of Political Services

Lant and colleagues (2008) correctly identify social inefficiencies that cause the underprovision of ecosystem services. Ecosystem services are a case of positive externalities. They are nonexcludable—people benefit from them whether they pay or not. Because they get little or no compensation, landowners have little incentive to provide the services and to protect the ecosystems. Also, pollution and other negative externalities of human actions cause the decline of ecosystems and their services.

To increase efficiency, Lant and colleagues propose designing new democratic institutions with spatial and hierarchical structures congruent with the scale of ecosystem services. These institutions would collect taxes from the beneficiaries of ecosystem services and from agents that produce negative externalities, and reward landowners for the provision of ecosystem services, thus generating incentives for the cost-effective protection of ecosystems and biodiversity.

The problem with this idea is that the democratic political process also suffers from externalities. Just as landowners in a free market put their land to the most rewarding use for themselves, and not necessarily for society as a whole, political agents also look after their own interests.

The most basic ingredient of efficient democracy is a knowable and thoughtful electorate. However, voters have little incentive to spend the time and effort to inform themselves and think about the political issues—in our case, the details of environmental management. A voter’s effort benefits the whole of society in a nonexcludable way, and only a small fraction of this benefit accrues to him- or herself. Voters who spend considerable effort in making up their minds end up reaping the same rewards as voters who spend little or no effort. As a result, most voters spend very little effort. Moreover, because the costs of bad policies are borne by all, and only a small fraction falls upon each voter, voters often indulge in self-