



“Environmentalist” label not in our best interests

We are responding to Donald Strong’s editorial about ecologists and environmentalism (*Front Ecol Environ* 2008; **6**[7]: 347). We think advocating for the role of ecologists and ecological science in environmental decision making is different from what is commonly meant by the terms “environmentalist” and “environmentalism”. We agree that Earth is undergoing major environmental changes, and that the information ecological science can provide is a necessary component that policy makers will require if they are to make informed decisions.

We are concerned that Strong’s usage of “environmentalist” and “environmentalism” is naïve and risks misleading some members of the ecological science community. Environmentalist and environmentalism have lost the meanings he ascribes to them. They have become politically charged terms with the power to polarize conversations. We agree that there has been a “...negative branding of environmentalism...”, but we disagree that this is the sole result of “...the war on science”. We think it equally likely that it is the result of individuals and groups allowing their values to creep into their analyses of environmental problems. Regardless of the accurate identification of the source of the negative connotations associated with the terms “environmentalist” and “environmentalism”, we think that it is important for all of us to be aware and sensitive to this negativism. Equating ecologists and ecology with environmentalists and environmentalism will prove catastrophic to our science. If we are perceived as mixing our politics and our values into our science, we will lose our credibility, and risk our ability to have our science considered in policy setting deliberations of environmental change.

I (IB) am confident that I would not have been invited to recent meetings and interacted with individuals

who are in a position to have a major influence on energy policy, if they thought I was mixing my personal opinions into my representations of science as related to the environment and natural resources.

Our strengths – as contributors to current and future environmental deliberations – derive directly from perceptions of the quality of our science. While it is likely that there are few ESA members who are not environmentalists at heart, we urge all members to resist being labeled as environmentalists or to allow what we do as scientists to be labeled as environmentalism.

Indy Burke¹ and Bill Lauenroth^{2*}

¹*Haub School and Ruckelshaus Institute of Environment and Natural Resources, University of Wyoming, Laramie, WY;* ²*Department of Botany, University of Wyoming, Laramie, WY*
* (wlaunenro@uwyo.edu)

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Labels and values: a reply to Burke and Lauenroth

Professors Burke and Lauenroth and I agree on a great deal. First, their assertion that “few ESA members...are not environmentalists at heart” is exactly the point of my original essay. The three of us also agree that one should not shout “environmentalist” in a theater crowded with suits from the energy industry. Even more, the “result of individuals and groups allowing their values to creep into their analyses of environmental problems” is a perfect description of the anti-environmental movement; indeed, such phony analyses “polarize conversations” about the environment.

The authors and I begin to part ways regarding their strictly negative connotation and narrow definition of “values”. The values of basic science are objectivity, rationality, and rigorous empiricism. In the sub-discipline of ecology, values are multifarious. *Frontiers* melds values of basic science with other values from social sciences.

Social science involves more subjectivity than basic science and, in doing so, addresses values that differ among groups. Pertinent to ecology and the environment, values that go beyond those of basic science include *utilitarian values* (for example, ecosystem services and what the environment can do for humans: where The National Mining Association sees coal profits, others see ecosystem services eroded by global warming), *intrinsic values* (patriotic, religious, and deep aesthetic feelings about nature: many Americans, and the ESA, see “purple mountain majesty”, whereas an American president is reputed to have once said, “A tree is a tree. How many more do you have to look at?”), and *opportunity values* (if we don’t burn it now, what would all this fossil fuel – and the land, sea, and atmosphere destroyed by its exploitation – be worth in the future?). In environmental science, we endeavor to understand different kinds of values, not camouflage them.

Finally, there is one point about which I just plain disagree with Burke and Lauenroth. Although they claim that my arguments risk “misleading some members of the ecological science community”, I believe that such members are pretty savvy and will not be swayed by the word police any more than by partisan, ideological claptrap from conservative groups. Will these members dedicate their lives to a science that dare not speak one of its names?

Donald R Strong

Department of Evolution and Ecology, University of California, Davis, CA
(eicesa@ucdavis.edu)

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The self-sufficient services fallacy

Katherine Ellison’s column, *What if they held Christmas and nobody shopped?* (*Front Ecol Environ* 2008; **6**[10]: 568), contained an important oversight regarding the conflict between economic growth and environmental protection. The article began with a timely reminder that the profligate

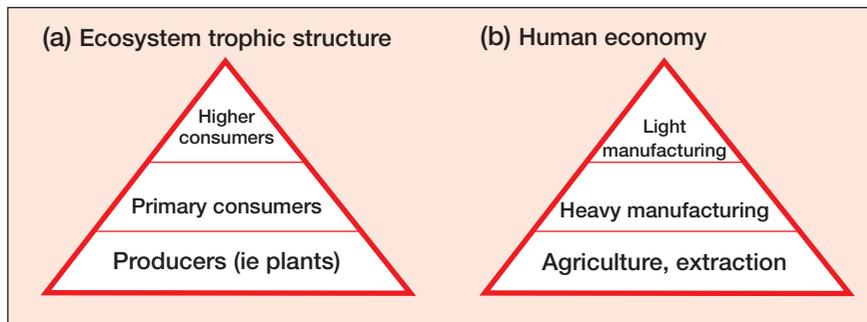


Figure 1. Trophic structures of ecosystems (a) and human economies (b). “Service providers” interact throughout ecosystems and human economies. All other things being equal, increasing service sector volume requires increasing trophic structure volume. See Czech (2008) for more details.

consumption characterizing Christmas in the US has a heavy ecological footprint. Ellison rightly noted that such consumption is finally being scrutinized by various organizations. She wrote, “The rapid rise of anti-growth groups, such as [the Center for a New American Dream] worldwide suggests people are catching on to what one recent book dubs the fallacy of ‘shoveling coal on a runaway train.’”

Actually, the book was titled *Shoveling fuel for a runaway train* (Czech 2000), a title meant to introduce a metaphor. The “runaway train” is the American economy, and “shoveling fuel” describes the effect of conspicuous consumption. When we’re on a runaway train, heading for a wreck, the last thing we ought to spend precious time on is shoveling fuel!

Ellison wrote, “This winter, I plan to support the US service economy. I may just buy mom a massage, give my kids an hour of rope-climbing, and find a personal trainer for my husband...I can help keep the world economy chugging without contributing to all those greenhouse-gas emissions...”

This is a fallacy that I will dub the self-sufficient services fallacy (SSSF).

It is probably the most common among those claiming there is no conflict between economic growth and environmental protection. The key point is that the services sector – which exists to serve producers and consumers, and which is not self-sufficient – is part of an economy that grows as an integrated whole.

A good way for ecologists to avoid committing this SSSF is by recalling their training in trophic theory. A trophic level doesn’t expand without a concomitant expansion of the broader trophic structure (Figure 1a). Neither does a guild of service providers, such as pollinators; there have to be more flowers to pollinate. This principle is rooted in the laws of thermodynamics, which apply to the human economy as well (Figure 1b). Classical economists, beginning with Adam Smith, knew that agricultural surplus was required, to free the hands for “the massaging of moms” in the market, and for the division of labor in general.

To Ellison’s credit, she did not use the SSSF to promote economic growth. She instead used the non-committal “keep the world economy chugging”, rather than “keep the economy growing”. An economy

may chug at a sustainable level. Unfortunately, if we use the SSSF to promote economic chugging (or anything else), we empower others to use the fallacy to promote economic growth. The difference would be one of degree and not of principle.

For example, one could state, “I plan to support the US service economy even more than Ellison. I’ll buy mom five massages...I can help keep the world economy growing without contributing to all those greenhouse-gas emissions”. That would be wrong, and dangerously so. Not only would the massage sector be part of an economy that emits greenhouse gases in the acts of production that provide people with income to purchase massages, but a growing economy would also contribute to a *higher rate* of greenhouse-gas emissions.

The SSSF (among other misunderstandings) leads too easily down the path of least resistance; that is, to the already tempting, win-win rhetoric that “there is no conflict between growing the economy and protecting the environment”. That is the rhetoric that shapes the opinions that produce the policies that destroy the environment and, ultimately, the human economy itself.

Brian Czech

Natural Resources Program,
National Capitol Region,
Virginia Tech, Falls Church, VA
(czech@vt.edu)

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