

The New Resource Economics: Old Ideas and New Applications: Discussion

Frank A. Ward

There is some overlap and agreement on issues by both authors. However, my comments will focus primarily on the Anderson paper because it is somewhat more controversial than Willey's. I will address the following four questions: (a) What unifying theme or common problem is addressed by the authors? (b) What are the strong points made by Anderson? (c) What are his shortcomings? (d) Can Anderson's "new" paradigm be resolved with the conventional wisdom of natural resource economics thought?

Throughout my comments, I make the explicit value judgment that increased economic efficiency is the objective function by which natural resource decisions should be judged. I also make the conventional assumptions traditionally made by applied welfare economists, especially that preferences of the political-economic system can be measured in monetary willingness-to-pay terms (Young).

Both papers address the following problem: The adoption and diffusion of economic (efficiency) evaluation criteria regarding natural/environmental resource decisions by relevant actors (politicians, bureaucrats, and the electorate) have been and will continue to be slow. Each author has a different explanation for the problem, and makes a different call for action.

Willey attributes the slow diffusion of economic criteria to five factors: assumptions made by economists in model building which are unrealistic and difficult to test; the high cost of overcoming the measurement problem (e.g., pollution studies); incentives imposed on economists (relating to publication pressures) which result in the development of oversophisticated theory with dubious social payoff; economists' use of questionable criteria in evaluating human and other life; the fact that economists, while supporting environmental/resource policies on grounds of eco-

nommic efficiency, are insensitive to politically important income redistribution implications for changes in property rights. Willey makes a call for action grounded in a better integration of economic research with the other sciences and better communication with decision-making groups. In my view, most resource economists would agree with Willey's call for action.

Anderson, on the other hand, attributes the poor diffusion of economic evaluation criteria among resource decision makers to something more fundamental in human nature, specifically to what he calls "government failure," a concept developed by the public choice school (e.g., Demsetz) that views the incentives for actors in the resource decision-making arena as such that their objective function(s) normally would not include economic efficiency. Anderson's plan of action calls for us to reshape our way of thinking by adopting solutions to resource problems less tied to government resource management and founded, instead, on more extensive private property rights definition, enforcement, and transferability.

Two of Anderson's major points are valid: (a) There may exist "government failures" precluding efficiency (e.g., Buchanan and Tullock, Young). (b) If private property rights to all natural resource assets can exist, be enforced, and be transferred, then decentralized efficiency will result. However, in my view there are far too many natural resource situations where the above ownership criteria cannot be met at a low enough cost to justify economically totally private management. This leads to what I see as two major shortcomings of Anderson's paper.

First, in developing the elements of his NRE paradigm, Anderson attacks what I believe to be straw men associated with ORE, straw men which do not represent the mainstream of the profession. For this reason, his paper is misleading. Second, and most important, there are too many kinds of resource management

Frank A. Ward is an assistant professor of natural resource economics in the Agricultural Economics Department of New Mexico State University, Las Cruces.

situations where his NRE paradigm will fail to improve efficiency relative to public management, in spite of existing government failures associated with ORE.

In constructing the (admittedly) sketchy elements and policy mechanisms of NRE, Anderson overcontrasts NRE and ORE by portraying ORE (actually certain ORE practitioners) as consisting of technicians who, once armed with mathematical/statistical/theoretical tools, are enamored with and sell the government on large-scale computer models as a basis for efficient management of natural resources. This is misleading.

My view of the ORE paradigm, on the contrary, is one which seeks to find methods to improve economic efficiency in natural resource management based on the following (descending) order of preference.

Most preferred are those situations where transactions costs of private natural resource ownership/management are not too high and where would-be entrepreneurs can be required to face the opportunity costs of their decisions. In such circumstances, the market is the ORE's best friend. Institutions should be put in place which encourage private ownership, enforcement, and transfer of property rights as a means of encouraging economic efficiency. For example, much ORE research has been devoted to constructing private property institutions regarding the ownership and transfer of western water rights such that economic efficiency is encouraged while third party effects are minimized (e.g., Hartman and Seastone).

As to the second most preferred ("second-best") set of existing circumstances, ORE would take the view that in those situations where extraction, use, and/or consumption of certain natural resources makes heavy use of open, unpriced common-property resources which have high transaction costs associated with defining private property rights, then government pricing of residuals may be an economically effective method of improving efficiency.

It is my view that public ownership/management of certain natural resources (and associated benefit/cost evaluations of related decisions) is viewed by many OREs as only a third-best context in which efficiency can be met. Very few mainstream economists would suggest that benefit/cost analysis for public resource investments is either fully understood by agency practitioners or would be properly applied even if it were understood.

But, with all its acknowledged weaknesses, distortion and abuse of benefit cost analysis would not disappear if the government were to stay out of it (Ciriacy-Wantrup).

Anderson's second shortcoming is that he ignores the fact that for many common property resources (e.g., groundwater) where defining private property rights has high transactions costs, the opportunity cost of using the resource may not confront the user, and efficiency losses associated with private ownership and management may be greater than the losses from public management and associated government failure.

Demsetz (who is cited by Anderson) has shown that, in general, many market failures can be seen as falling under the high transactions cost framework whereby the costs to the individual of information, contracting, and enforcing are large (relative to the benefits), and there is too little incentive for the private sector to undertake economically efficient activities, such as efficient groundwater management (Young).

I believe that Anderson's NRE can be reconciled with the ORE paradigm that he criticizes. In my view, although ORE and NRE represent a convenient line of demarcation, there is not much difference in principle, if in application. NRE could be incorporated into the ORE "mainstream" by subjecting the "privatization" hypothesis to tests where possible, a benefit-cost assessment of NRE, so to speak. For those resources for which management under private ownership causes fewer efficiency losses than government failures associated with public management (a possible example may be the market for surface water rights), institutional modifications relying on privatization would be viewed favorably by OREs and Anderson alike.

References

- Buchanan, J., and G. Tullock. *The Calculus of Consent: Logical Foundations of Constitutional Democracy*. Ann Arbor: University of Michigan Press, 1967.
- Ciriacy-Wantrup, S. V. "Benefit-Cost Analysis and Public Resource Development." *J. Farm Econ.* 37(1955):676-89.
- Demsetz, H. "The Exchange and Enforcement of Property Rights." *J. Law and Econ.* 7(1964):11-20.
- Hartman, L. M., and D. Seastone. *Water Transfers: Economic Efficiency and Alternative Institutions*. Baltimore MD: Johns Hopkins University Press, 1970.
- Young, R. A. "Economic Analysis and Federal Irrigation Policy: A Reappraisal." *West. J. Agr. Econ.* 3(1978):257-67.

Copyright of American Journal of Agricultural Economics is the property of Agricultural & Applied Economics Association and its content may not be copied or emailed to multiple sites or posted to a listserv without the copyright holder's express written permission. However, users may print, download, or email articles for individual use.