



“Summary of article by Daniel A. Underwood and Paul G. King: On the Ideological Foundations of Environmental Policy” in Frontier Issues in Economic Thought, Volume 1: A Survey of Ecological Economics. Island Press: Washington DC, 1995. pp. 106-108

**Social Science Library: Frontier Thinking in Sustainable Development and Human Well-being**

## **“Summary of article by Daniel A. Underwood and Paul G. King: On the Ideological Foundations of Environmental Policy”**

Arguments in the philosophy of science have suggested that ideological preconceptions underlie all analysis, including economic analysis. The ideological basis of economic analysis is called "metaeconomics." As long as different groups of economists have different ideological (metaeconomic) foundations, an objective resolution of debated issues cannot take place. This paper examines the differences in the metaeconomic first principles and the resulting analytic and policy conclusions of two schools in environmental economic analysis: neoclassical economics and the steady-state approach.

### **Metaeconomics of Neoclassical A-Environmentalism**

The ideological basis of neoclassical economics can be traced to Adam Smith's notion that individuals working in their self-interest will promote the welfare of the whole of society. This Smithian view, along with the use of logic, mathematics and utilitarian Benthamite views, was applied to the concepts of value and distribution. This process of methodological development culminated in Pareto working out the marginal conditions needed for a market system to maximize social welfare.

The belief that individual action would result in maximizing social welfare (albeit under a set of restrictive conditions) was questioned by Pigou, who argued that, due to the nature of property relations, self-interested individuals may behave in ways that are antagonistic to total social welfare. In particular, Pigou claimed that there may be externalities to individual action that, if ignored, would violate Pareto's optimality conditions. This challenge to the neoclassical framework was countered by Coase, who argued that negatively affected individuals would alter the actions of externality producers through a set of side payments. Alternatively, if there were too many individuals to make side payments possible, then the imposition of fines or taxes could correct the actions of individuals and bring the system back to a Pareto efficient point.

Another challenge to the neoclassical position was raised by American conservationists in the early 20th century, who argued that natural resources were being extracted and used rapidly, posing problems for future generations. In response, Hotelling claimed that welfare will be maximized if nonrenewable natural resource extraction is guided by the discount rate and a corresponding growth in resource value over time. If the net value of the resource grows at the discount rate, then future generations will be compensated for a smaller stock of natural

resources by a larger stock of productive capital. Once again, the thrust of the argument was that the market, through the price system, could regulate the rate of extraction.

The position of the neoclassical school, therefore, is that there is no absolute scarcity. Scarcity is relative, and the price system will send signals that will lead to appropriate substitutions.

### **Metaeconomics of the Steady State**

Influenced by the work of Nicholas Georgescu-Roegen, Kenneth Boulding and Herman Daly, the steady-state school questions the notion that the market can dictate a path of sustainable growth. This school adopts the laws of thermodynamics as a metaeconomic first principle. Thus, while steady-state theorists agree with neoclassicists that relative price movements generated by market transactions can result in Pareto optimal resource allocations in the short run, and that welfare can be improved by internalizing externalities, they argue that the problem of assimilation of pollutants by the environment can be solved only by a ceiling on throughputs. They contend that this is because there are biospheric limits to economic activity. The thrust of the steady-state position is that the problem of scarcity is not one of relative scarcity, but one of absolute scarcity. Absolute scarcity exists both in terms of resource availability and assimilative capacity.

### **Contemporary A-Environmentalism**

Contemporary a-environmentalism is essentially an application of the neoclassical framework to environmental issues. It argues that the problems of pollution and energy can be solved by substituting for environmental resources in production, while the market will take care of intertemporal problems. Using the past as a guide, it suggests that capital and technology will take care of environmental problems in the future.

There has been a recognition by some economists of the laws of thermodynamics and their implications for substitution. For example, Solow and others see the laws of thermodynamics and conservation as ultimate constraints on economic activity. However, many address the problem primarily as a question of providing adequate energy sources, an approach that separates the problems of the environment from energy issues, although these two issues are actually closely related. In fact, technological energy "fixes" ignore the environmental impacts of increased energy use. Therefore, given that there are no exceptions to the laws of thermodynamics, one of the metaeconomic first principles should be that there is an upper bound to the application of technological innovation.

### **Is Reconciliation Possible?**

The difference in the evolution of economic thought between the neoclassicists and the steady statist rests partly on their notions of value. To the neoclassicist the value of a commodity is its price. Thus environmental resources are valued by the amount people are willing and able to pay to maintain them. Given relative price movements and the changes in value they bring about, neoclassicists do not see any limits to growth. Steady statist, on the other hand, take the limits to growth based on thermodynamic considerations as their starting point. As a result, steady

statists' concept of value is grounded in "sustainability" and a moral imperative not to degrade the environment. This transcends the "rational egoism" of the neoclassicists. This difference in viewpoints may not be easily resolved.