The Non-economist

by

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Abstract

The "economistic" (market-place) model of nature and of natural process dominates both ecology and renewable resource management in Canada. Reasons for the overwhelming power of this interpretation of biological process are reviewed and "economic outreach" as a consumptive process is examined. Could any image of nature other than the economistic one be compatible with the goals of resource management in industrial society? Post-industrial society? Some alternative historical and current views are discussed.

Key words: Resource Development, Resource Conservation, Economics, Non-monetary values

The original guideline for the noneconomist was this: how factors other than economics shape the integration of forestry and wildlife management. As a noneconomist, all I could think to ask myself in response was, "Since when has any factor other than economics governed anything having to do with resource management?" As a noneconomist and non resource manager, I could ask that, in my innocence. So I delivered the abstract that you have seen.

As all of us know, the economic model of nature and of natural process dominates both ecology and renewable resource management in Canada and elsewhere. This model is part of the paradigm or the shared consensus of reality which I discussed in my opening remarks. We are accustomed to viewing the workings of nature not merely as analogous to the workings of a human economy but as extensions of the human economy.

A superb study of the genesis and evolution of the economic image of nature has been contributed by Donald Worsster (1979) and I am indebted to him for some of what follows. The only point to make (or rather to re-make) at the outset is that we communicate with one another by way of metaphors, but over time those metaphors have a way of becoming perceived realities. The solar system is *really* a clock; the ecosystem *really* is an economic system.

I am very much interested in the concept of "competition" as it pervades economic theory, evolutionary theory, and ecologic theory, among others. When I say the concept of competition I mean competition as an idea. There is no doubt that there is competition, and plenty of it, in human affairs, not only in the cut-and-thrust of the market place but also in other civilized pursuits such as status-striving, achievement-striving, dominance-striving, and all that sort of thing. But how did the idea of competition find itself transferred into bodies of theory such as organic evolution and ecology? This question may seem slightly off-track, but I hope you will stay with me long enough for me to try to show that it has relevance in discussion of the role of factors other than economics in

resource management generally, and in the technoculture as a whole.

Competition as an idea reveals itself in all sorts of theories, for example, social dominance, territory and aggression, the competitive exclusion principle, niche, island biogeography, succession, and of course natural selection. I believe that its use in these contexts may be legitimately questioned. In economics, very broadly, competition is seen as "the free action of individual self-interest." This obviously has philosophical implications, but one cannot help but wonder about its relevance in biology. Also, in economics, competition is seen as "that which makes an equilibrium between forces of supply and demand"; this meaning also slips over into ecology and evolutionary biology.

As an idea, competition is at the core of the "struggle for survival," or the "struggle for existence." In mythology and in literature, competition is the basic stuff of heroism and tragedy. And we all know about the Stanley Cup, the Olympics, the public service, and academia.

Just so you will know "where I am coming from," as they say, I should tell you that I suspect that competition is "natural," which is to say that competition exists in the nonhuman world, only to the extent that it is a pathological condition that may emerge in times of stress. I do not believe that it is "normal." In human affairs, however, the pathology of stress (at least in some societies) becomes the norm. It is induced by population densities, social breakdown and other physical factors, and it is fed and nourished by an entire complex of cultural factors.

But because competition is at least the Western social norm, naturally competition is assumed to be the universal norm. As a civilized human imperative it is readily translated into a biological imperative, projected upon all of nonhuman nature. Once it has been projected upon and satisfactorily perceived in nonhuman nature, competition may then be described as "natural," even "healthy."

Seen in this way, competition becomes a cultural and a historical perspective of nonhuman nature. At present few such perspectives are as important; perhaps none is. I suspect that the competitive pathology in human affairs has coloured our images both of nature and of ourselves since prehistory, although its modern economic context has only been institutionalized in Western thought since perhaps the late 18th century (which left it plenty of time to become institutionalized in modern biology in the 19th century).

In economics there seems to be nothing more fundamental than the concept of scarcity. Scarcity can be seen to drive both supply and demand. In their self-interest, individuals compete not only for scarce commodities, but also for the hierarchical places which the scarcest of commodities represent. We all know about status symbols. The competitive struggle turns out to be for the surrogates of belongingness.

It is very instructive to go through the exercise of trying to find the intellectual origins of the concept of scarcity. It turns out to be one of the most fundamental and apparently unquestioned "givens" in all of our cultural impedimenta. You can

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question economists, and you can consult the texts, and you can never come up with much more than a restatement of the role of scarcity, never its origins.

I have been going through this exercise recently, for my own reasons, and I well recall my colleague William Leiss (1976) doing so when he was writing *The Limits to Satisfaction*. The restatement that he used, and which I will use here, is this: "Scarcity: a condition which mankind perpetually faces because at any moment in time total resources are fixed." This condition, it is alleged, is the permanent human condition, and it has always been thus. As Leiss says, "it implies either that nature has failed to endow our planet richly enough or that we cannot gain access to sufficient resources with the means currently at our disposal." He goes on to discuss the concept of scarcity in our society, a "psychology of scarcity" that is "associated with the multiplication of material goods as instruments for the satisfaction of needs." And, in the commercial society, for the satisfaction of advertising-induced perceived needs.

That is a separate issue. What is important for my purpose here is the fundamental assumption of universal scarcity. It follows from this assumption that when we project a model of contemporary market-place competition upon other human societies, for example, hunting-and-gathering societies, or upon nonhuman societies or communities or ecosystems, of necessity we are saying that those societies and communities and ecosystems are driven by needs and by competitive urges, in the same way as we are. Which I think is preposterous. But that is what the economics texts and the biology texts are telling us whenever they talk about either universal scarcity or the struggle for existence.

As I have said, where the notion of scarcity came from is obscure. All we can say in relative confidence is that competitive notions in economics are relatively recent. We cannot find much in the Bible or in classical thought other than the usual injunctions against greed and loan-sharking, and homilies about rich men and the kingdom of heaven, camels and the eyes of needles. Certainly the Greeks were interested in political economy, but the notion of economic competition doesn't seem to be there in any significant way.

But what the Greeks do have a lot to say about (perhaps even the last word, in spite of Shakespeare) is tragedy. Tragedy involves competition because it involves heroism. Joseph Meeker (1972) in his exploration of what he calls "literary ecology," provides a stimulating review of this form of competition in *The Comedy of Survival*. He points out that tragedy seems to be a specialty of western (not eastern) cultures, arising from the Greeks.

Meeker explains it the following way. The tragic view assumes that man exists in a state of conflict with powers that are greater than he is. (Just as the economic view assumes that man exists in a permanent state of scarcity.) Both the greater-than-human power and the state of scarcity may be seen as external nature. Tragic literature is about the hope and the expectation, perhaps even the demonstrable fact, that man is equal to or superior to the challenge. So the tragic hero is, as Meeker says, a triumphant image of what man can be. Needless to add, the greatest human triumph is over nature.

This humanistic image reaches the pinnacle of its development, after Greece in Renaissance Europe, especially Elizabethan England. Especially Elizabethan England because of (a) Shakespeare and (b) Bacon, both of whom, in their separate ways, exalt heroic striving and the nobility of achievement arising out of struggle.

Now, struggling, striving and achieving are very respectable notions today. They are very much part of the contemporary experience of reality, and they date back to the Renaissance. It took somewhat longer for economic competition to appear.

As a discipline, or as a field of study, we are told that economics does not seem to have emerged until the 17th or even 18th century. There were a lot of things happening in the Enlightenment. The economic historian George Soule (1952) reminds us that at that point there were developing

new concepts of science and scientific method, ideas of individual liberty, freedom of conscience, social and political equality, the substitution of contract based on choice for class status, a humanism expressed in hope for better things in this world rather than merely salvation in another . . .

So here we have some factors other than economics beginning to show the way to the modern "development imperative," and the various notions of "progress" that are part of it. We have objective science, human individualism, egalitarianism, social contracts, and all the rest. We also have humanism. All of these are building blocks of the social construction of reality within which we live today.

At this point I must make my position clear. I perceive resource management as part of the greater human enterprise, which is the conquest of nature. Here we must return to the early 17th century and Francis Bacon, patron saint of the conquest of nature, who provided that conquest as the human goal and legitimated it philosophically.

Bacon celebrated technology. His last book *The New Atlantis* is a technological Utopia. There had been technology ever since some human antecedent first domesticated fire, but it seems that Bacon was the first, as Morris Berman (1981) puts it, to elevate control of the environment to a philosophical level. This was "an unprecedented step in the history of human thought." The conquest of nature — the management of nature, if you like — was entirely new both as an idea and as an imperative.

Bacon's argument, which has been brilliantly explicated by Leiss (1972), reveals that the mastery of nature through science and technology turns out to be the realization of the divine intent. His project, which was so easily and readily secularized, never looked back. As many have noted at this point, henceforth science meant utility, meant power over nature. Man was meant, through science, to compete with and to overcome the forces of nature. Man as hero.

Almost simultaneously, there were emerging in other quarters the early murmurings of individualism. The year before Bacon died, 1625, the Dutch philosopher Grotius published his *The Law of War and Peace*, which raised the matter of the inalienable and indestructible rights of the individual. These rights began to be seen as being as fundamental as life itself; they were natural. Read together with Bacon, this would seem to confer the right of dominance over nature not merely upon the human species, but also upon the human individual.

There was much comment in the mid-18th century about the "natural state." There was Hobbes on natural freedom, natural self-sufficiency, natural independence. There was also much of combat, and of competition, and of "natural" nastiness, the antidote to which is human Reason. It is through Reason that man transcends his natural proclivities for bloody mayhem. Reason produces the "social contract" that allows us to continue the peaceful pursuit of science, technology, and the conquest of nature. Competition is *natural*, part of our animalness. Cooperation is the human invention, transcending nature. And that is the way we continue to see nature, and human society, to the present day.

By the time of the American and French revolutions, John Locke had already enunciated "natural" rights of life and liberty, and "natural" rights of property, and Rousseau had already spoken of "natural" freedom, good, and equality. All of these have a very modern economic ring about them. And all can be meshed with Baconian science. As George Grant (1969) has said, the "American supremacy is identified with

the belief that questions of human good are to be solved by technology; that the most important human activity is the pursuit of those sciences which issue in the conquest of human and nonhuman nature." Thomas Jefferson raised the same inalienable rights identified by Grotius 150 years earlier, rights that had been bestowed upon man, in Bacon's terms, by the divine beneficence.

It is interesting that Adam Smith's *The Wealth of Nations* appeared in the same year as the publication of the American Declaration of Independence. However, as Soule (1952) says, "That this classic of economic liberalism happened to appear in 1776... is not a mere historical co-incidence. Similar forces led to both famous documents." Smith believed in "natural" self-serving competition, "natural" liberty, and all the rest. Competition is essential to liberty. Good management can only flow from "free and universal competition," to which everyone must have recourse in the interest of "self-defence."

Worster (1977) says it was the good clergyman Thomas Malthus who really turned economics "dismal." It is interesting that today Malthus is still branded a "pessimist," when all he did was call them as he saw them. Very simply: food increases arithmetically; population increases geometrically. He could think of only two solutions. First, human free will and self-discipline. Second, natural selection (of course he did not call it that). Neither self-regulation in populations nor natural selection had yet been invented. But his work, first published in 1798, was soon to be given a dramatic new twist.

In 1820, the French botanist de Candolle observed, "*Toutes les plantes d'un pays, toutes celles d'un lieu donné, sont dans un état de guerre.*" Economic and social theory, and political philosophy, were, as though by osmosis, entering the life sciences. A dozen years after the "war" metaphor, there appeared Charles Lyell's *Principles of Geology*. While perusing it on board HMS *Beagle*, Darwin encountered such notions as the "struggle for existence," and competition as between both individuals and species. Lyell portrayed a natural world of ferocity and violence. Even more important, perhaps, Lyell could not swallow the cataclysmic theory of evolution that prevailed at the time. Changes seemed to be more gradual and continuing.

Darwin read Lyell and pondered the strange relics, fossil and living, of Patagonia and the Galapagos. Somewhat later, he read Malthus. We must remember that Darwin was a cultivated man. There is no reason to think that he had not read his Adam Smith, and his Locke, and all the rest. We can assume that Darwin was on top of the cultural paraphernalia of his time. He, like us, was living within a social construction of reality. He revised it dramatically, but he was still the product of it.

In *On the Origin of Species*, Chapter III is titled "Struggle for existence." It starts with reference to de Candolle and Lyell, who he says "have largely and philosophically shown that all organic beings are exposed to severe competition." By "philosophically" he meant "hypothetically"; he, Darwin, would provide the evidence. He emphasizes that this "struggle for life" must be "thoroughly engrained in the mind," because if we do not have it constantly in mind, "the whole economy of nature, with every fact on distribution, rarity, abundance, extinction, and variation, will be dimly seen or quite misunderstood." In other words, if you don't accept as given the competitive economic model of nature, then the next 428 pages aren't going to do you much good.

It is important to remember that besides laying down the law on the "economy" of nature, including competitive struggle, Darwin was very strong on evolutionary progress, improvement, perfectability, betterment, and so forth. Each stage was in some way superior to the last. This was to have overwhelming importance later on, when the humanists were going to have to swallow the fact of the human involvement in organic evolution. Progress and improvement made it tolerable.

The rest we know. The competitive market-place construction of the world was never more pervasive than it is today. It permeates the entire Western paradigm, perhaps especially in its North American, ruggedly individualistic form. I observed earlier that once we are able to see nature, for example, forests and wildlife, as an economic system, then we can also see them as extensions of our economic system. Worster (1977) says it results in our being unable to conceive of any possible relationship with nature that is not an economic one.

I have called this perceptual process "economic outreach." It is economic outreach that allows us to talk about nature and our relationship with it as resources and their management. The evolution of this perception has been long, and enormously complicated.

I have tried to suggest that in the history of ideas, very close to the root of this perception is the concept of competition. Surrounding the concept of competition are other concepts such as individualism, scarcity, independence, tragedy, heroism, free will, power, achievement, objectivity, natural rights, conquest, and — perhaps most important of all — progress.

Yes, there are forces other than the economic in our concepts of resources and their management. But none is far from economics. In many ways, economics springs from a parentage of much older ideas, all of which are so interrelated, and have been so for so long, that causal connections are almost totally obscured. To attempt to identify causal relationships is rather like water sampling in the mouth of a gigantic river of a thousand upstream tributaries. As the river of ideas flows into Isaac Newton's Great Ocean of Truth, the mix is murky. There is no longer an identifiable hierarchy of ingredients.

On this form of analysis, forest and wildlife management are already fully integrated within the larger stream of ideas and concepts having to do with man and nature and their relationship. There will be other forms of analysis, on which all of you will be better equipped to speak than I.

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