

CENTER FOR REFLECTION ON THE SECOND LAW
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The Center for Reflection on the Second Law has taken for its subject the condition of planet Earth and its prospects for the future. The assumption that underlies the work of the Center is that the earth is a spiritual as well as a physical organism. This view is supported in Riverdale Papers V, particularly The Spirituality of the Earth, available on request. The earth is seen to be sacred in the sense that:

1. It is, for the human, the primary revelation and experience of the Divine.
2. It is holy by reason of its Divine creation.
3. It participates of the Divine in performing the evolutionary function.
4. It is entitled to veneration and religious respect.
5. It is not to be profaned violated or made common.

The Center recognizes that the assumption may not be fully established in philosophy or theology. But for those who do not accept it, the necessary regard for the earth as source and sustenance of life requires a practical concern for its welfare and makes a bridge for all to get into the discussion of the condition of the planet. It is believed however, that only recognition of the holiness of the earth will inspire the necessary indignation over the harm being done and the necessary fervor to overcome obstacles in finding corrective measures. (An observer once remarked that the passivity with which New Yorkers accept the poisoned condition of the Hudson River explains why commercial and municipal agencies go on using it for a sewer. See the science section of the New York Times for September 9, 1980. Of especial interest to North Carolinians is General Electric's history of discharging PCBs into the Hudson.)

It is the Second Law of Thermodynamics, called by Sir Arthur Eddington the "supreme law of nature" and by Albert Einstein the "premiere law of all science", that describes the inexorable transfer of useful matter/energy into a less useful state with every use. Every action involves the withdrawal of matter/energy from the environment and the subsequent return of the same matter/energy to the environment in a state of lowered usefulness. Think of the acts of eating and breathing or of making an automobile.

The earth acts thriftily. When something is used in a natural process, the waste is returned to the soil and provides nutrients for future life. Plant and animal life is self renewing, self cleansing, self healing in nature's economy. The entropy process is acting, but the resources are used over and over again and air and water and soil are continually renewed.

The human is also a part of the natural process, but there is something different about human technology, at least that of the industrial age. Industrial technology is not self renewing, does not reprocess resources, is not thrifty and poses the most dire threat to life through the wastes generated. The operation of the Second Law did not reach the consciousness of modern western people until lately. Now the problem of Love Canal, TMI, the James River, the Hudson River, Long Island ground water, Neuse River fish kills, roadside PCBs and a host of other threats to human life brings on awareness that it is really the life of the planet itself that we are worrying about. It is earth striking back. If we poison the earth we poison ourselves. We are all one and we are all interdependent. The snail darter, the Blue whale, the Dusky Seaside sparrow, the Pergrine falcone, the Brown pelican, the North American wolf are

are all holy parts of a holy earth. To violate or profane them is sinful and self violative.

The reason for going over all this, (it is mostly a repeat of things said before) is to refocus attention. For some weeks now we have been studying economics in an effort to find out how standard economic thought agrees with or conflicts with our view of the earth. And we have become confused. Economists, by and large, have not spent a lot of time absorbing an appreciation of the sacredness of mountains and oceans and rivers and forests, of pelicans and sparrows. Nor have they been greatly distressed by trash and junk and radiation. They see the earth as something whose every cubic kilometer holds so many million tons of aluminum, iron, chromium, uranium, copper, gold, so that there can be no real possibility of scarcity. As soon as technology provides the system for refining very low grade ore then everything will be OK so far as resources go. Read Herman Kahn's The Next 200 Years.

Our study group has run up some blind alleys probably because we did not define the problem sufficiently. You cannot attack an economist on his own ground and expect him to accept something he has devoted a lifetime to disproving. He can't shift into a new set of assumptions that readily. He sees Western industrial economy as something that works and works remarkably well. People who live in Western economies have escaped unspeakable misery and deprivation and have achieved comforts and life styles kings would have envied not long ago. There are ills, to be sure, but compared to any other economic system known to the world they are miniscule. The economists are unshakeable, and maddening as it is, their logic is persuasive. Every time you read Herman Kahn you are left gasping. "There is little to justify all this gloom and doom. Your fears are mostly groundless. We're going to get through all right. It may be perilous, but with determination and technology we will make it. Stop worrying so much. If the sea and the air and the soil are polluted then we will find the necessary technology to clean them up. We will have to internalize the costs so that polluters will pay and have the necessary market incentives to stop polluting, but pollution can be licked with a market approach. Technology will solve the problem. Come what may, we'll find a way."

And that is where we are right now. Can we put the health of the planet in the hands of the market? That seems to be what the economists offer. But they don't seem to know the Second Law. They have not been challenged by Kenneth Boulding's words, "The economic process consists of segregating entropy, where increasingly improbable structures of low relative entropy are created at the expense of higher entropy level wastes somewhere else." Which is one way of saying that you can't reduce waste; all you can do is change its location and that at the cost of more waste. Economic activity, seen in one light, results in satisfying human wants and in producing scarcity, trash, junk, and poison. It is this second aspect that economists do not treat.

That's where I think the real debate is.

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October 23rd - Michael Telson, Chief Economist for the U. S. House Budget Committee, a specialist on energy will speak at NCSU at 3:30 pm. For room number call Dr. Chuck Korte, NCSU.

October 30th - The Second Law Study Group will meet. Time and place to be announced.

November 13th - Hazel Henderson will meet with the Group at 9:00-10:30 am. Place to be announced.