

CENTER FOR REFLECTION ON THE SECOND LAW
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Affiliated with
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A freely rotating wheel slows down, heating the bearings; it never by itself speeds up, cooling the bearings, gaining mechanical energy. Water runs downhill; it never turns around and goes up. Things tend to go to a lower energy state. High things tend to fall. Hot things tend to cool. Orderly arrangements tend to become disorderly. People get older; they do not get younger.

All these statements are expressions of the Second Law of Thermodynamics, also called the Universal Law of Entropy. Entropy is that pool of energy which is not available for work. The First Law of Thermodynamics says that energy is conserved; it is never lost. But it does degrade, says the Second Law, from useful to useless. Thus the energy in a gallon of gasoline once used to propel an automobile is forever lost for further work. The energy resources of the universe are finite. Rudolf Clausius, one of the fathers of the science of Thermodynamics says, "The energy of the universe is constant but the entropy of the universe increases toward a maximum."

As awareness of the finiteness of resources grows, people begin to draw conclusions as to what that means:

"The sense of apocalypse is very widespread." Joseph Campbell, NEW YORK TIMES MAGAZINE, April, 1979. "We are nearing the end of an epoch . . ." Jeremy Rifkin in THE EMERGING ORDER - God in the Age of Scarcity. "A leaderless but powerful network is working to bring about radical change in the United States." Marilyn Ferguson in THE AQUARIAN CONSPIRACY soon to be published. "We simply can't keep on living this way. It's just incomprehensible that anyone can think we are not faced with major change," overheard in a restaurant.

Impending change is also forecast by my brother, Thomas Berry, Director of the Riverdale Center for Religious Research, New York City. He is a foremost scholar of Charles Darwin and Pierre Teilhard de Chardin, and as a result has found himself immersed in an appreciation for the earth, the earth process and man's relation to the earth.

From THE HUMAN VENTURE: "In recent centuries man through science and technology has obtained extraordinary control over the forces of the natural world. The result has been a despotic dominion over the earth that for a while has driven the earth forward in an exceptional way. A courage, inventiveness, and a power has been shown that has achieved what could hardly have been dreamed of in former centuries. We command nuclear energy. We travel into space. We know the genetic coding process. A stupendous phase of human history has taken place.

"Yet all is not well in Denmark. The Technological age of despotic dominion has brought about the devastation of the continents, the seas and the air. Earth formations, living species of fishes and birds and flowers, the very atmosphere and the seas, that took hundreds of millions, even billions of years, to bring into their high moment of fruitful interplay are collapsed in a brief period of time. In a sudden

shock the birds fall down, the porpoises are suffocated. Finally man himself becomes an endangered species.

"While there have been ice ages and floods and droughts, eruptions on land and at sea submersions of land into the sea, these have been moments of transition to other forms of life expression. This time we face what seems to be a special kind of destruction, a destruction that does not promise new life forms, but stops the very play of life in its higher forms. It seems to be a break in the total process.

"At this traumatic moment a new level of reflection has begun. Man begins to think more profoundly and more comprehensively on the dynamics of the earth. He begins to see that he himself is more fragile, more expendable than he thought. The earth will not be reduced to abject servitude. After all man's assaults the majesty of the earth stands over against him with an inscrutable countenance. There are gathering signs of a response in the form of massive retaliation.

"It would appear that man is finally awakening to this fact, to his own vulnerability, to the consequences of his own harsh activities. This begins to produce a type of reflection that western man has not known for centuries. Perhaps it is a kind of reflection that man has never known before. In the wisdom born of this reflection lie the future hopes of man and the earth. This is our historical moment - a precious moment"

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With my brother's encouragement I am setting up a center for reflection on the subject of the earth and the Second Law intended to support a Riverdale way of thinking about man and the earth, about man as the earth in its conscious phase, and about the earth as progenitor of life, primary teacher, lawgiver, healer, source of joy and beauty, primary theologian and interpreter of God. When one sees himself in proper relation to the earth he knows why he suffers when a bird suffers, why he is wounded when a fish is poisoned, why he knows instinctively that he shares a unity with everyone and everything.

The center is called THE CENTER FOR REFLECTION ON THE SECOND LAW. It is apt, it seems to me, to think of, for example, the material prosperity of the consumer nations, not as prosperity but as a disproportionate withdrawal from the energy bank of the earth and a corresponding increase in entropy. In this sense relative increase in entropy is a measure of morality. It is basic that increase in disorder should be resisted. Evil is synonymous with the forces of chaos (entropy). Pollution and trash and useless things are entropy, and the vast energy that went into the making of things now in our junkyards has been subtracted from total earth stocks often for trivial or frivolous purposes.

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We are planning for a conference in the Fall where we will discuss alternate futures for North Carolina in consideration of the Second Law and the threat to the earth. Suggestions are welcome.

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This first circular is to inform as many as may be interested of the infant Center. Your comment is welcome. Write a piece on the Second Law and its applicability! Do you know of anyone who might want to be on our mailing list?