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Can Value Be Applied Through Cybernetics?

> Man reaches a moment in life when he sees nothing but God. Imagine how great is man's position.
> —Sadii

Sadii prophesied the above wisdom seven centuries ago and already we have reached that moment of life. Sadii's "God"—be it Christian or Moslem God, or be it knowledge or realization of the greatness of some natural power—does not seem to be an important matter here. The importance is that we live in an age, when man has reached the highest of his potential—if not ultimate—through his scientific mind. If he accepted a faith years ago and became humble through his conditioned belief, today he has more reason and evidence to be more humble. Here lies the importance of the scientific man in the 20th century; a virtue he has which one ventures to call value. And if one does not posses that value today, he is of no value.

Value has always been an element of man's social and mental behavior: either others judged him by it or he judged others. But, then, every society has its own values

as criteria. How many universal values can we name? Very few, I venture to say; and those universal values are frequently based on scientific conventions.

Respect for each country's flag, for instance, or the avoidance of marriage within the family, or responsibility for public health-all are values, made universal through reasoning. Local value is subjective in nature, while universal value is objective. My intention, in this paper, is not to find out what value is, or whether one type of value is better than the other, but to see whether value can be applied through cybernetics.

Before we go further, it is wise to point out some aspects of cybernetics and relate them to philosophy.

Cybernetics has been defined by Weiner as "the science of control and communication, in the animal and the machine." According to W. Ashby, "cybernetics, too, is a theory of machines, but it treats not things but ways of behaving. It does not ask, (what is this thing?) but (what does it do?) ...it is thus essentially functional and behavioristic."

If the above statements by Weiner and Ashby are valid, then cybernetics should find its way into human philosophy, as well; for without the human's physical and mental behavior there can exist no philosophy.

Cybernetics helps man to clarify his ideas concerning the relationship between animate and inanimate matter. The Philosophic Institute For Artificial Intelligence was established in 1966 by the University of Notre Dame. Its charge was to study constructively, and without polemic, the interaction between computer technology and various philosophic conceptions of the nature of man. C. Dechert speaks of cybernetics as a science including three main areas of control:» Control of systems of machines, technological processes, and process in

general which occur in the directed actions of man on nature....» The latter seems to be a key field of research in the world, especially in the Soviet Union, where, for a long time, cybernetics seemed to be rejected.

Marshal Mc Luhan in his essay, "Cybernation and Culture," anticipates the future in our electronic age by saying, "Paradoxically, the electronic age of cybernation is unifying and integrating' whereas the mechanical age had been fragmenting and dissociating." If man's life is so involved in cybernetics, is it not also true that his value be likewise involved in cybernetics?

The question is, how cybernetics can be implied in value. The pragmatists of the late 19th and early 20th century–John Dewey especially–believed that value was power of energy. But, if one were to mention this statement, today, in order to question its scientific outcome, a pragmatist might object by stating that what Dewey meant was not power in the sense of organic or inorganic energy. This, today, would seem confusing, because energy is energy, regardless of its source. The problem, here, is that a pragmatist cannot accept the theory that value changes, even though it is a power of energy.

The second law of thermodynamics speaks of entropy as a loss of energy:

1) The term entropy is used in many fields and its meaning shifts somewhat due to the particular application.
2) *In thermodynamics:* a quantity that is the measure of the amount of energy in a system not available for doing work, numerical changes in the quantity being determinable from the ratio dQ/T where dQ is a small increment of heat added or removed and

T is the absolute temperature.

3) ***In statistical mechanics***: a factor or quantity that is a function of the physical state of a mechanical system and is equal to the logarithm of the probability for the occurrence of the particular molecular arrangement in that state.

4) ***In Communication theory***: a measure of the efficiency of a system (as a code or language) in transmitting information, being equal to the logarithm of the logarithm of the number of different messages that can be sent by selection from the same set of symbols and thus indicating the degree of initial uncertainty that can be resolved by any one message.

5) The ultimate state reached in the degradation of the matter and energy of the universe; state of inert uniformity of component elements; absence of form, pattern, hierarchy, or differentiation (entropy is the general trend of the universe toward death and disorder.

J.R. Newman

6) ...the Second Law of Thermodynamics states that the entropy of a closed physical system always increases, and this means that in any self-contained part of the universe, the available energy is running down.

L. Barrett in his *The Universe and Dr. Einstein*, mentions: The universe is thus progressing toward an ultimate "beat-death," or as it is technically defined, a condition of "maximum entropy." When the universe reaches this state some billions of

years from now all the processes of nature will cease. All space will be at the same temperature. No energy can be used because all of it will be uniformly distributed through the cosmos. There will be no light, no life, no warmth–nothing but perpetual and irrevocable stagnation. Time itself will come to an end. For entropy points the direction of time. Entropy is the measure of randomness. When all system and order in the universe have vanished, when randomness is at its maximum and entropy cannot be increased, when there no longer is any sequence of cause and effect, in short, when the universe has run down, there will be no direction to time–there will be no time. And there is no way of avoiding this destiny. For the fateful principle, known as the Second Law of Thermodynamics, which stands today as the principal pillar of classical physics left intact by the march of science, proclaims that the fundamental processes of nature are irreversible. Nature moves just one way.

Since entropy speaks of the loss of energy, and since value is considered a "power of energy," therefore, one may safely say that value can lose its power. It has been proven that value changes as history grows older, and we are certain that no one is able to define value on a universal level; then why shouldn't one take a scientific definition of it and try to treat it scientifically?