

by

Frederick B. Wood

Three ethical principles appear to be necessary for the creative development of human civilization at this stage of evolution of mankind:

A self-realization ethic-- the view that the proper end of all individual experience is the further evolutionary development of the emergent self and the the appropriate function of social institutions is to create an environment which will foster that process.

An ecological ethic-- the view that our world is a limited one, that there is an underlying oneness to the human race, and that man is an integral part of the natural world. Such an ethic incorporating concerns that go beyond the physical/biological sphere to include: a concern for well-being among cultures(cultural ecology), among various institutions(institutional ecology), and among various aspects of self in community with others(ecology of consciousness).

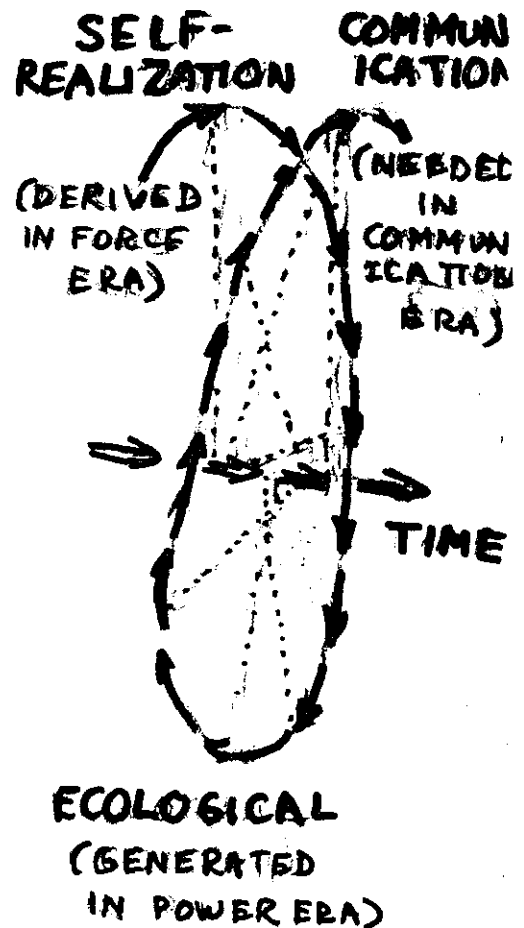
A communication ethic-- the view that in the Communications Era(technological) that to achieve the previous two ethics in practice, people must use more fully the technologies of communication and computing in ways that maintain a balance between diversity and order. A first approximation to find a method is to look for ideal distributions of power among different cultures and individuals such that an entropy-like property is maximized.

The first or prime question on which this series is based is the survival of human civilization on the planet Earth. The second question is about the quality of human life on this crowded planet. To get at these questions I shall make hypotheses on the basis of the process of "technological meditation," which will have to be tested, and verified, modified, or rejected when the evidence is collected.

I make two basic hypotheses in regard to the survival of human civilization:

- CRITICAL  
PATH OF  
EVOLUTION
- (1) There is some critical path about which the evolution of human civilization must stay close or else the present leading countries will collapse, leaving the evolution of civilization to be carried on by some other culture.

The hypothesis of the biological spiral of evolution is illustrated on the next page in conjunction with an empirical plot of the number of scientific and technological discoveries and inventions per century.

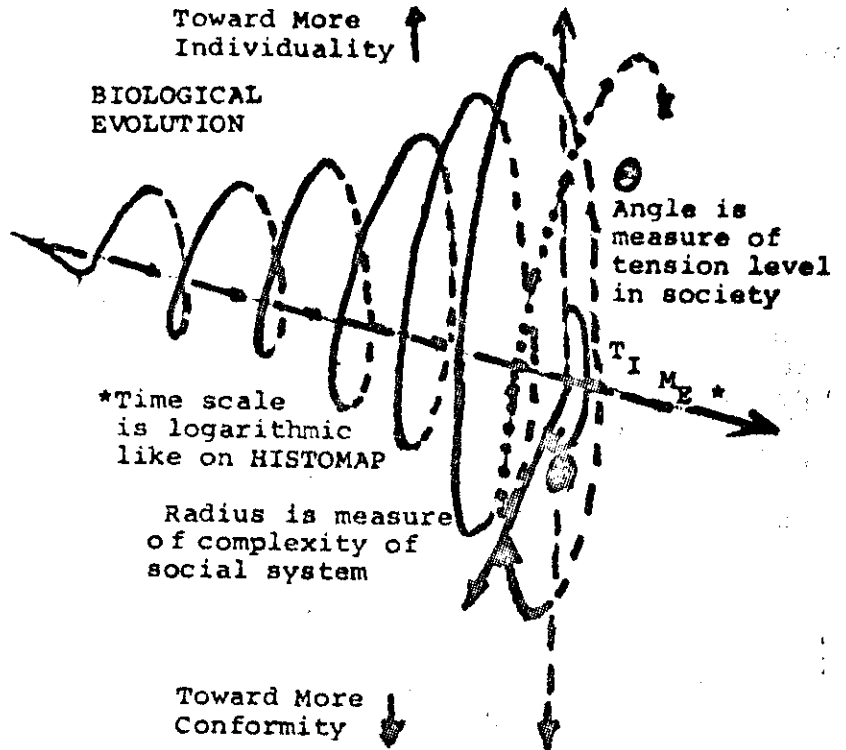


**COLLAPSING  
COUNTRY CAN  
DESTROY LIFE  
BY RADIATION**

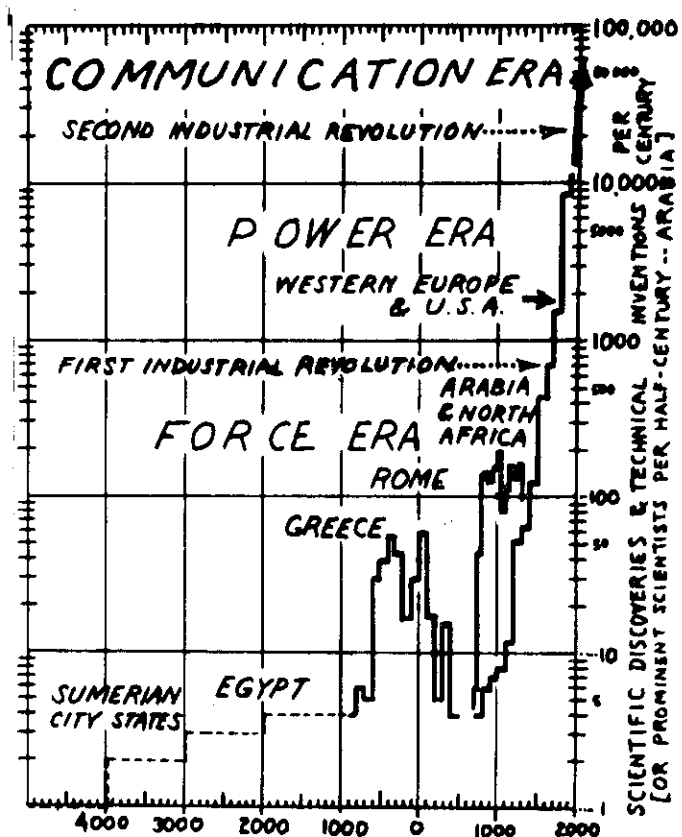
(II) The problem is compounded in that the major countries can destroy human life on this planet in the process of their societies collapsing. This means that we cannot be satisfied with letting a major power collapse like the disintegration of ancient Rome. A collapsing civilization must either be brought down gently or transformed to get it on the critical path of successful evolution to the next stage of more human organization. Since the development of atomic fission bombs and hydrogen fusion bombs, a collapsing major country could trigger a nuclear war that could contaminate the biosphere with sufficient radioactivity to destroy human life on this planet.

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The techniques we learn for more self-realization through psychotherapy, encounter groups, and meditation are important parts of the "self-realization ethic", but are not sociologically effective, unless coordinated with the development of the other two ethics required at our stage of civilization.



Then I add two hypotheses on how we can solve these problems:

- HOMEOSTATIC  
CYBERNETIC  
FEEDBACK  
LOOP SIMULATION
- (III) The most fundamental approach to understanding the social problems of the world is the cybernetics feedback loop or homeostatic approach. This approach will gradually be extended by various simulation techniques using computers as a prime tool. This approach has some drawbacks in that many of the human factors are difficult to simulate in a formal way, so that there is danger that simulations may omit important factors.
- ENTROPY-LIKE  
PROPERTIES OF  
SOCIAL SYSTEMS
- (IV) There is a complementary method, namely that of estimating the values of entropy-like properties of the social systems. These techniques may give fuzzy answers, but will tell us whether we are going in the right direction. Attempting to define entropy-like properties of social systems brings into focus the necessity for equivalent completeness theorems which remind us not to forget the more subtle human factors.