
Charting the Flip to Cognitive Clarity

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The rather "flippant" title is appropriate for at least three reasons. We know that radical changes - flips - in human behavior are needed if we are to successfully deal with the "problematique". CACOR has launched a program to "chart" a strategy to influence change. In a presentation to CACOR last year (April, 1991 *Newsletter*), Gail Stewart identified the key impediment to change as a form of cognitive dissonance that occurs when we are given two different competing messages at the same time. If she is right, we need to set our sights on a search for cognitive clarity.

Conventional messages surround us; they are fed by the institutions which have provided "the good life" for many of

us; they are supported by most of us, since our desire is to maintain the "good life". Different and competing messages arise from the awareness that the behaviour associated with our "good life" style has been the major cause of the global problematique. These competing messages are received in different ways by different people. Most receive them in the context of our "good life", which conveniently leads to conclusions that we can have our cake and eat it too. Much of the activity related to the environment, from blue boxes to the Brundtland Report to UNCED, reflect this "good life" framework. To others, these competing messages are cast in a very different perceptual and intellectual frameworks.

The challenge we face, I believe, is that of searching for and seeking to understand a new intellectual framework which conforms to the realities of the problematique. The task is not an easy one; we need to do no less than change the way we view the world.

Ways of Viewing the World

It is the understanding of what is happening to our life support systems that creates the necessity to rethink some very basic assumptions which have led us to where we are today. One could argue that our fundamental mistake has been that we have established ourselves as managers of our environment and its complex of ecological life support systems. It would follow then that every facet of our current thinking and the institutions which support and nurture it need to be critically examined, including the way we go about identifying and solving problems.

There are different ways of exploring and understanding the current "problematique". The approach taken by most, and many in CACOR, has been primarily analytical. All of us are both the supporters and victims of the logic of the Western way of viewing the world, with its scientific, empirical and modelling approaches to aiding and abetting understanding. But these approaches and the institutions which derived from and thus continue to foster them have apparently failed us. It is not likely then that our Western traditional ways alone will lead to the understanding necessary to make the necessary inroads toward amelioration of the problematique.

We need to explore new ways of viewing the world, new epistemologies. I think this is the context in which Gail Stewart's message of April 1991 was cast.

There are a number of "movements" which have emerged in the past few years which reflect a different way of thinking about our environment. Some represent a strong emotive response which we might expect to evolve into a more intellectual response with time. Others are based on experience over generations and, while not yet justified theoretically, have validity in practice. Finally, there are those which are based on a sound body of theory, fed by scholars which are at the forefront of thinking and change. Many of the latter are important in determining what is possible; that is, they bear on strategy.

I will briefly illustrate or refer to some of the foregoing.

The Thinking of the "Radical Ecology" Movement

The more radical edge of the deep ecology movement would have humans so much a part of their environment that we would be totally subject to the laws of nature - as the tigers and cockroaches. This highly biocentric view, while hopefully illogical in the extreme, does provide a basis for posing the

question, "what do we mean when we say that humans must begin to react more as "a part of" rather than "apart from" the environment.

Social Ecology

Social ecology is situated somewhere in between the foregoing and our conventional anthropocentric view. According to some social ecologists, our current ecological and related problems arise from our domination of nature for our own purposes. Fair enough; but they go further.

Domination of nature has its roots in the domination of human by human such as within the hierarchies which bring the young into subjugation to conventional wisdom or of women by patriarchies. They hold that we cannot expect to get the required cultural and behavioral changes in a society that pits people against people as buyers and sellers, exploited and exploiters, subjugated and subjugators (we might add, perhaps, defence and prosecutor or the party in power and the opposition).

Following this line of thinking, the social ecologist views human liberation as an ecological problem and defending the earth as a social problem.

Indigenous Knowledge

The Summer, 1992 issue of *Northern Perspectives*, the organ of the Canadian Arctic Resources Committee, reports on studies in progress in our North which are attempting to find ways whereby both science and indigenous knowledge can be more effectively applied to understanding the Northern environment. The studies have been prompted by the many instances where indigenous knowledge has provided the right answer to explain observed phenomena while scientific approaches have not.

The key point which relates to the topic at hand is that the studies are directed to finding out more about "ways of knowing" of the aboriginal peoples. Ways of knowing are of course part of the way we view the world and how we organize to survive in it. In the case of our indigenous peoples, their survival under the harsh conditions of the North in the past relied on knowledge of their environment, to quote Martha Johnson of the Dene Cultural Institute, "a knowledge with roots based firmly in the northern landscape and a land-based life experience of thousands of years".

This basis of knowing contrasts with that of the scientific, which breaks down data into smaller elements in order to understand whole and complex phenomena. Social and natural phenomena are viewed as separate components. These different ways of knowing are "at the heart of much of the conflict and debate between state wildlife managers and indigenous peoples today."

Here, as is the case of many "non-main-line" peoples, is a culture, with its guiding mythologies, ways of viewing the world, of knowing, of organizing and of doing in which there is no question that the traditional view is that they are part of their environment. Using Gail Stewart's distinction, their thinking is within an "environment as context" as opposed to an "environment as surround" framework. The "surround" framework is the conventional way of viewing - and managing - the environment and, as she pointed out, while an important concept, should be subordinate to "environment as context".

An Example from Agriculture

Since the second World War, the broad objective of agricultural policy has been economically efficient production. In the face of current global economic realities, we find ourselves striving even harder to attain economic production efficiency. If we do not, economic agriculture and the jobs that are supported by it, will be in jeopardy. Certainly it is not politically expedient in the face of Free Trade, GATT or the electorate to raise food prices to reflect the environmental costs of production or to provide further subsidies to farmers.

If this situation were not bad enough, we now are confronted with a new policy objective, that of developing a sustainable agricultural system. The debate about whether or not the goals of sustainability can be attained in the "environment as surround" framework of economically efficient production has begun. It is an important issue; after all, our soils are one of our life support systems and are in a sad state, in Canada and most other countries.

Soils research has served the economic efficiency master very well, but has not been as attentive to the smaller but persistent constituency of organic agriculturists. The latter have their roots in practice and history and it is only in recent years that they have become credible with a segment of the public. Their offspring, ecological agriculturists, have even infiltrated academia.

The essence of the emerging debate on sustainability is in the two very different ways of viewing agriculture. On the one hand, the rational approach, justified by good scientific evidence, claims that soils can be maintained in perpetuity by more effective and efficient use of our technologies. This, I believe, is an example of the conventional anthropocentric viewpoint; to manage in an "environment as surround" framework.

The ecological agriculturists hold that the soil and associated water degradation in the West over the past 50 years has been the direct result of conventional high-input, economically efficient practices. Since their viewing stand is an "environment as context" framework, they seek to understand the relationships between farmer and the farm ecosystem, farmers and ecosystems, practices and the broader

environmental and societal implications⁶. The practice of ecological agriculture is, of course, limited to activities which can fit within our current "economic efficient production" system.

The debate about sustainable agriculture is really one of rationalizing two ways of viewing the world; two ways of knowing. As our colleague Jersey Wojciechowski has noted many times, the way we regard knowing is crucially important in the determination of the future.

The disparate viewpoints represented by "environment as surround" and "environment as context" are not limited to agriculture or management of our northern ecosystems. They are, I think, at the heart of a number of current disagreements including management of both our forests and our fisheries, the development of large hydro projects, such as James Bay II and development aid strategies.

Possible Actions

Assuming that the foregoing describes the sort of shifts in our way of thinking required to alter our behaviour to reflect ecological realities, then what do we do Monday morning? Given recognized deficiencies in our economic system, it is a common target to aim at.

The Search for "A New Economics"

John Kenneth Galbraith, in his latest book *The Culture of Contentment*, discusses at some length how economic theory has shifted over the years to serve political objectives or realities. The current political reality is that the voting public in the USA, which is largely made up of the contented middle and upper classes representing about 30% of the population who normally vote, demand a continuation of the comfortable status quo. Thus, the underlying assumptions which justify economic policies are drawn from theorists which fit the needs -laissez faire, market driven self-regulating system, less government intervention, trickle down, etc. This has a familiar ring.

Searches for a new economics to serve environmental realities, which in the longer term must be social and political realities,

⁶ In his paper in the June 1992 CACOR Proceedings, Clive Simmonds put an interesting perspective on information management which is pertinent here. Existing technology transfer systems in agriculture are "top-down" (or "technology driven" or "trickle down"), and that part of farmer experience and understanding which relates to the long term productivity of his farm ecosystem have little influence on research priorities or on the driving policy system. Here is a case for "reversal" and a "freshening of capital" that Clive called for.

are not new. Many, if not most, of these searches are cast in an "environment as surround" framework where the focus is, for example, on including the real costs of resource use in our accounting systems and/or on capitalizing on the potential of all people to contribute to the growth economy.

Jeremy Wright, in his article in the March, 1992 CACOR Proceedings, challenged conventional economics and explored a system which would support environmental sustainability and social stability. His use of the term "sustainable development" in the title suggests that his argument is cast in the "environment as surround" framework. This does not diminish the value of his thesis, but it does raise questions about what changes might be needed to reflect an "environment as context" viewpoint.

In any case, it would seem realistic to believe that acceptance of an economic system which would be compatible with ecological realities in an "environment as context" framework will not occur until behavioral changes have shifted political priorities, as implied by Galbraith.

If Not Economics, Then Perhaps Energy?

The other area which has received a lot of attention is energy. Here, C.R. (Buzz) Nixon and others in CACOR have provided much thoughtful input to our *Newsletter* and *Proceedings*. Certainly, when one considers that an individual in the Western World uses in the neighbourhood of 20 times more energy than an individual in the developing world, then our Western energy consumption is indeed a problem - a problem equal to or approaching that of population growth in contributing to ecological and social degradation. But in what framework of reference are we viewing the energy problem; "environment as surround" or "environment as context"?

Rennie Whitehead, in the September, 1992 CACOR Newsletter reported on the change of the Club of Rome stance

on nuclear energy. He concluded that the Club's decision to support the nuclear alternative as the least damaging to our environment as logical. This decision is possibly quite logical within the "environment as surround" reference. To validate it in an "environment as context" framework, we would need to at least relate the decision to a strategy which recognizes the wide disparity between our Western use of energy and that of most of the world's populace and at best, a commitment to such a strategy.

But is the "contented culture" - to use Galbraith's term - likely to "buy" an energy argument cast in an "environment as context" framework? --- are we?

What's Left?

The questions raised by the examples in this presentation are difficult ones. I have read many articles which seem to support the views I have touched upon today; some of the most impressive to my mind I have not referred to, such as the contributions of the Ecology of Knowledge Network - of which Jerzy Wojciechowski is both a founding member and long time contributor. I think many of the answers we seek in dealing with the world problematique lie in better understanding ourselves in relation to our ecosystem. Much of this understanding relates in turn to "how we know" and how we apply our knowledge in our responses and actions. Getting our collective minds around various "ways of knowing" or "the way we regard knowing" seems to be a required starting point for CACOR endeavors.

Perhaps the most worthy contribution which CACOR can make is to continue our collective search for cognitive clarity and at the same time devise ways of sharing this search with others. The strategy for sharing would include ways of linking those things of immediate concern to fundamental underlying causes and relevant theory and of exploring possible future opportunities and impacts.