

# Cultural myths and realities of problem-solving

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The topic, alternative futures and environmental quality, is a challenge. My professional life has been devoted to trying to understand the functioning of man in his own family, and developing ways to help him change himself in his family. He uses the same family relationship patterns in relationships in social systems. Man does not change in his family system without finding new ways to relate to the important social systems around him. One can look beyond the family and see the same relationship patterns being replicated in larger and larger social systems.

A systems view of man represents a different order of thinking than is represented in our conventional theories. Systems thinking provides no magical answers, but it does provide a way of conceptualizing human problems, it offers a more realistic evaluation of the difficulty in changing the basic patterns in any human dilemma, and it suggests ways to avoid some of the pitfalls of conventional thinking and to institute progress toward long-term goals.

## Systems thinking about Man

My concerted effort toward a different theory of emotional illness began almost 20 years ago in family research with maximally impaired, institutionalized, young schizophrenic patients in which the patient and his entire family lived on a research ward together for indefinite periods of time. This living together experience revealed a fascinating new world of clinical observations never previously reported in the literature.

## Assumptions and hypotheses

**That emotional illness is directly related to the biological part of man:** This was based on the assumption that man is more intimately related to the lower forms of life than is generally recognized, and that emotional illness is a dysfunction of that part of man which he shares with lower forms. Before Darwin, man operated with the notion that the earth was created exactly as it is now and all theoretical thinking was based on man's uniqueness. Darwin presented his work just over a century ago and it was over 60 years before man could hear it, and take it seriously.

Man is one of the most highly developed forms of life thus far. His most rapid evolution is the rapid increase in the size of his brain. The hypothesis about overspecialization postulates that the most highly developed forms become extinct fastest. Twenty years ago, when I devoted more study to this, I was postulating that man's brain, an overspecialized development of the special protoplasm we call brain cells, would be the evolutionary development that leads to man's extinction.

**That emotional illness is a multigenerational process:** This postulated that the problem in the patient is a product of imperfections in the parents, and the parents a product of imperfections in the grandparents, continuing back for three or more generations, and that each generation was doing the best it could considering stresses and available resources. The most important function of this

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COMMUNITY SCALE		I	II	III	I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
ELEMENTS	EKISTIC UNITS	MAN	ROOM	DWELLING	DWELLING GROUP	SMALL NEIGHBORHOOD	NEIGHBORHOOD	SMALL TOWN	TOWN	LARGE CITY	METROPOLIS	CONURBATION	MEGALOPOLIS	URBAN REGION	URBANIZED CONTINENT	ECUMENOPOLIS
	NATURE															
	MAN			•	•								•	•	•	
	SOCIETY			•	•								•	•	•	
	SHELLS															
	NETWORKS												•			
	SYNTHESIS:															
	HUMAN SETTLEMENTS															

postulation was to help observers escape from the narrow limits of individual theory which blames parents for the child's problem, and to gain a more objective overall perspective.

**That there is a wide discrepancy between what man does and what he says he does:** This was another guiding principle that permitted observers to gain some distance and begin to see some order to the multiplicity of messages and actions that are part of the hour-to-hour observations.

**Structuring "hard to define" concepts into functional facts.** This was part of an effort to find some structure and *fact* in the shifting, subjective world of human experience. The incorporation of functional concepts into therapy has resulted in therapeutic results that are far superior to conventional therapy. For instance, one concept would say, "That man dreams is a scientific *fact*, but what he *dreams* is not necessarily a *fact*." The same formula was applied to a wide range of functional concepts, such as "That man *feels* (or *thinks*, or *talks*) is a scientific *fact*, but what he feels (or thinks or says) is not necessarily *fact*." This same formula produced interesting results when applied to *love*, and also to *hate*. People speak glibly of *love* as if it is a well defined entity.

After much experience with family members, as they used the term and reacted to it, I arrived at the following functional definition of *love* as a relationship *fact*. It was, "I am not able to define *love* accurately, but it is a *fact* that statements to another important person about the presence or absence of *love* in self, or in the other, predictably results in an emotional reaction in the relationship."

**Cause and effect thinking:** Man has been a *cause* and *effect* thinker since he first became a thinking being and he began to look for causes to explain events in his life. We can review the thinking of primitive man and be amused at the evil and malevolent forces blamed for his misfortunes, or we can review the history of recent centuries and chuckle at the errors in the assignment of blame that resulted from lack of scientific knowledge, while we smugly assure ourselves that new scientific breakthroughs and logical reasoning now enable us to assign accurate causes for most of man's problems.

Systems thinking, which this research has tried to implement in human relationships, is directed at getting beyond *cause* and *effect* thinking and into a systems view of the human phenomenon. In the course of trying to implement systems theory and systems therapy, we have encountered the intensity and rigidity of *cause* and *effect* thinking in the medical sciences and in all our social systems. Man is deeply fixed in *cause* and *effect* thinking in all areas that have to do with himself and society. Systems thinking is not new to man. He first began to use it in theories of

the universe, much later he started thinking systems in the natural sciences, and also in the physical sciences. There was a rapid increase in systems thinking with the beginning of the computer age, until now we hear about efforts to implement systems thinking in many new areas of the applied sciences. The medical model has been one of the proven cornerstones of good medical practice. It is based on *cause* and *effect* thinking and the principles of careful examination, the establishment of aetiology (*cause*), making an accurate diagnosis, and specific treatment directed at the aetiology. The medical model has served medicine and society well for all diseases within the person of the patient. The theory and practice of psychiatry also employs the medical model, and *cause* and *effect* thinking. The theory, based on the study of the individual, postulates an illness in the patient developed in relationship with the parents or other close family members, it requires a diagnosis, and treatment is directed to the patient. The model "blames" the parents for the illness, even though the psychiatrist may deny that he blames the parents, and the model excludes other family members from the treatment process. And so, the medical model created a dilemma when applied to emotional (functional) illness. Family research was directed at trying to find an answer to this dilemma. The development of systems theory and therapy has been superior in treating emotional problems but it is conceptually and therapeutically out of step with medicine and conventional psychiatry.

Emotional reactivity in a family, or other group that lives or works together, goes from one family member to another in a chain reaction pattern. The total pattern is similar to electronic circuits in which each person is "wired" or connected by radio, to all the other people with whom he has relationships. Each person then becomes a nodal point or an electronic center through which impulses pass in rapid succession, or even multiple impulses at the same time. One important variable has to do with different kinds of impulses, and each kind exists in a wide spectrum of intensity, and in degree of importance. A more important set of variables has to do with the way each nodal point, or person, functions in the system.

Each person becomes aware of his dependence on all the other nodal points. To be remembered is that each nodal point is "wired" to the others with two-way circuitry. There is a wide variety of subtle alliances for helping each other, refusing to help, or hurting the other. The larger unit can punish a single member, and a single member in a key position can hurt the whole unit. If the head of the family unit is calm, the entire family unit can be calm and the electronic system operates smoothly. When the head goes into panic and transmits panic impulses, the others send back panic messages which further panics the head, in a mounting cycle of panic, with poor handling of

messages, disorderly and conflicting messages, and increasing paralysis of functioning. Any unit can recover from periodic panic or overloads, but when the panic becomes chronic one or more of the individual units can collapse (become sick), and there are several variables for handling that. There is another set of very important variables having to do with the way the family unit is wired into other families and larger social systems, and into the total system of all society.

This family systems-theory postulates that all of the characteristics described under "emotional reactivity," including all those "choices" man appears to have, are all part of that part of man he shares with lower forms of life. All of these items can be understood as *facts of functioning* and put into the electronic model. He does have one ability beyond *other* protoplasmic life, and that is his ability to observe, think, abstract, and see the natural order, to understand the secrets of nature, and to govern himself a bit differently. However, an inordinately high percentage of brains are so imbedded in the emotional system that their thinking is mostly governed by emotionality.

What is "emotional reactivity" and how does it operate? I have used the term "emotional reflex" which is accurate and which makes it a little more synonymous with biology. It is easiest to observe emotional reflexes in an intense emotional twosome, such as a marriage, in which they operate mostly within the twosome, without the introduction of variables from the larger system.

The reflexes operate with antennae-like extensions of all sensory modalities, but a high percentage operate from visual and auditory stimuli. For example, one spouse may return from work with a higher than average tension level, reflected in a glum "look," which raises tension in the other and which is reflected in an octave or two increase in the verbal response. The first is sensitized to sounds which results in a higher tension, etc.

The thesis communicated here is that, insofar as man is a *cause and effect* thinker, which is most of the time in calm periods and all of the time in tense periods, he is still as inaccurate, unrealistic, irrational, and overly righteous in his assignment of *causality* for his problems as were his ancestors who pursued a different kind of evil influence, who eliminated different kinds of witches and dragons, and who built different kinds of temples to influence benevolent spirits.

## Theoretical concepts

The theory postulates two opposing basic life forces. One is a built-in life growth force toward individuality and the differentiation of a separate "self," and the other an equally intense emotional closeness.

The Family Systems Theory is made up of six separate interlocking theoretical concepts, each dealing with characteristics that apply to the whole system, or to separate segments of the system.

**The triangle:** The theory considers the triangle — a three-person system — as the molecule of any emotional system, whether it exists in a family or in a social system. The term triangle is used instead of the more familiar term triad, which has come to have fixed connotations that do not apply to this concept. The triangle is the smallest stable relationship system. A two-person system is an unstable system that immediately forms a series of interlocking triangles. The triangle has definite relationship patterns that predictably repeat in periods of stress and calm.

In periods of calm, the triangle is made up of a comfortably close twosome and a less comfortable outsider. The twosome works to preserve the togetherness, lest one become uncomfortable and form a better togetherness elsewhere. The outsider seeks to form a togetherness with one of the others, and there are numerous well-known moves to accomplish this. The emotional forces within the triangle are constantly in motion from moment to moment, even in periods of calm. Moderate tension states in the twosome are characteristically felt by one while the other is oblivious. It is the uncomfortable one who initiates a new equilibrium toward more comfortable togetherness for self.

When tensions are very high in families and available family triangles are exhausted, the family system triangles in people from outside the family, such as police and social agencies. A successful externalization of the tension occurs when outside workers are in conflict about the family while the family is calmer. In emotional systems such as an office staff, the tensions between the two highest administrators can be triangled and retriangled until conflict is acted out between two who are low in the administrative hierarchy.

A triangle in moderate tension characteristically has two comfortable sides and one side in conflict. As patterns repeat and repeat in a triangle, the people come to have fixed roles in relation to each other. The best example of this is the father-mother-child triangle. Patterns vary, but one of the most common is basic tension between the parents, with the father gaining the outside position — often being called passive, weak, and distant — leaving the conflict between mother and child. The mother — often called aggressive, dominating, and castrating — wins over the child, who moves another step toward chronic functional impairment. This pattern is described as the family projection process. Families replay the same triangular game over and over for years, as though the winner were in doubt, but the final result is always the same. Over the years the child accepts the always-lose outcome more easily, even to

volunteering for this position. A variation is the pattern in which the father finally attacks the mother, leaving the child in the outside position. This child then learns the techniques of gaining the outside position by playing the parents off against each other.

**Differentiation of self scale:** This scale is a way of evaluating all people on a single continuum, from the lowest to the highest possible level of human functioning. The scale ranges from 0 to 100. At the lowest point on the scale is the lowest possible level of self or the greatest degree of no-self or undifferentiation. At the highest point on the scale is a postulated level of complete differentiation of perfect self, which man has not yet achieved.

The scale has nothing to do with emotional illness or psychopathology. There are low-scale people who manage to keep their lives in emotional equilibrium without developing emotional illness, and there are higher-scale people who can develop severe symptoms under great stress. However, lower-scale people are vulnerable to stress and are much more prone to illness, including physical and social illness, and their dysfunction is more likely to become chronic when it does occur. Higher-scale people can recover emotional equilibrium quickly after stress passes.

Two levels of self have been postulated. One is solid self, made up of firmly held convictions and beliefs. It is formed slowly and can be changed from within self, but it is never changed by coercion or persuasion by others. The other level of self is the pseudo-self, made up of knowledge incorporated by the intellect and of principles and beliefs acquired from others. The pseudo-self is acquired from others, and it is negotiable in relationship with others. It can be changed by emotional pressure to enhance one's image with others or to oppose the other.

Low-scale people live in a feeling world in which they cannot distinguish feeling from fact. So much life energy goes into seeking love or approval or in attacking the other for not providing it that there is no energy for developing a self or for goal-directed activity. The lives of low-scale people are totally relationship-oriented. Major life decisions are based on what feels right. A low-scale person with a life in reasonable asymptomatic adjustment is one who is able to keep the feeling system in equilibrium by giving and receiving love and by the sharing of self with others. Low-scale people do so much borrowing and trading of self and show such wide fluctuations in their functioning levels of self that it is difficult to estimate their basic levels of self except over long periods of time.

As a group, low-scale people have a high incidence of human problems. Relationships are tenuous, and a new problem can arise in an unsuspected area even while they are trying to deal with the previous problem. When the relationship equilibrium fails, the

family goes into functional collapse, with illness or other problems. They can be too numb to feel, and there is no longer any energy to seek love and approval. So much energy is devoted to the discomfort of the moment that they live from day to day. At the very lowest point on the scale are those too impaired to live outside an institution.

People high on the scale are operationally clear about the differences between feelings and intellect, and they are free to state beliefs calmly, without attacking the beliefs of others for the enhancement of self and without having to defend themselves against the attacks of others. They are sufficiently free of the control of the feeling system to have a choice between intimate emotional closeness and goal-directed activity, and they can derive satisfaction and pleasure from either. They have a realistic appraisal of self to others, in contrast to lower-scale people, who feel self to be the center of the universe and who either over-value or devalue self.

Most people spend their lives at the same basic level they had when they left their parental families. They consolidate this level in a marriage, after which there are few life experiences that change this basic level. Many life experiences automatically raise or lower the functioning levels of self, but this shift can be as easily lost as gained. There are calculated ways to raise the basic level of self, but doing so is a monumental life task, and it is easy for one to say that the possible gain is not worth the effort.

**Nuclear family emotional system:** The term undifferentiated family ego mass was originally used to refer to the emotional system in the nuclear family — father, mother, children. The emotional process has the same basic pattern in extended families and social relationship systems. The original term is still as accurate as ever when applied to the nuclear family, but it is less apt when applied to the extended families, and it is awkward when applied to social systems. Now the terms nuclear family emotional system, extended family emotional system, and social system are used to describe the same emotional process in different areas.

A rough estimate of the spouses' level of differentiation of self conveys an idea about the quantity of undifferentiation potentially present for future trouble in the nuclear family. The greater the undifferentiation, the greater the potential problems. People pick spouses who have equivalent levels of differentiation of self. The life styles of people at one point on the scale are so different from others a few points removed that they consider themselves to be incompatible.

**Family projection process:** This is the basic process by which parental problems are projected to children. It is present in the full range of problems from the mildest to the most severe, such as hard-core

schizophrenia and autism. The basic pattern involves a mother whose emotional system is more focused on children than on her husband and a father who is sensitive to his wife's anxiety and who supports her emotional involvement with the children.

**Multigenerational transmission process:** This concept defines the principle of projection of varying degrees of immaturity (undifferentiation) to different children when the process is repeated over a number of generations. If the process begins with parents with low-level differentiation and the family is one that focuses maximal maturity on one child in several generations, it will eventually produce a child so impaired, both physically and emotionally, that he will collapse into dysfunction, such as schizophrenia, at any effort to survive outside the family.

### **Societal problems from an emotional systems view**

All of the people who were, or who are, members of families replicate the same emotional patterns in society. Family and societal emotional forces function in reciprocal equilibrium to each other, each influencing the other and being influenced by the other.

**Functional level of differentiation of self:** There are only a few areas in which societal patterns are slightly different from family patterns. Most of these have to do with the ways leaders come into, or are selected, for policy-making responsibility. The past 25 years, society appears to have been slipping into a functionally lower level of differentiation, or emotional regression. There have been upswings and slumps with a marked downswing during most of the 1960s, and an apparent upswing in the early 1970s. These observations are based on the same criteria used to estimate family functioning, which is the amount of principle determined "self" in comparison to the "feeling orientation" which strives for an immediate short-term feeling solution to the anxiety of the moment. The overall mode of operation in the past decade has been similar to the unsure, over-lenient "no-self" parent in dealing with the emotional demands of his immature teenaged child. The pattern belongs in the mid-range between the poorly differentiated family that still operates on a fairly orderly course that is relatively free of symptoms, and the chaotic paralyzed family inundated by feelings and impulse. This mid-range pattern is similar to the intense triangle between parents and the overwhelmed child who fluctuates between compliant niceness, facile intellectual discourses on his rights, and a medium amount of retaliation and threats.

Society appears to be much more similar to a family with an intense "undifferentiated family ego mass," than the less intense emotional fusion of 25 years ago. The members of society are fused into each other and are more emotionally dependent on each

other, with less operating autonomy in the individual. Emotional events are more similar to those "within an ego fusion" than to events between relatively autonomous people. A relatively differentiated self can live a more orderly life whether alone, or in the middle of the human pile. A poorly differentiated person is not productive alone. Powerful emotional "togetherness" forces draw him into the discomfort of fusion, with the impingement of self on self and the counter mechanisms to deal with too much closeness. Society has been gravitating into the human piles in large urban centers where the individual may become more alienated from his fellow man than before. Group activity, including encounter groups, and promiscuous sexuality become panicky pretenses to overcome the alienation of too much fusion proximity to others. In the past, man has used physical distance to relieve the tension of emotional fusion. Physical distance is harder to arrange with an exploding population.

A spectrum of problems associated with population explosion play a major role in man's deeper anxieties. There are the obvious spiraling problems of rapidly developing technology, providing more and more people with the high standard of living made possible by the technology, maintaining an economy in which the masses provide the market for the products that keep technology operating, the rapid depletion of the world's natural resources that supply the technology, and pollution of the environment with the byproducts of technology and man.

The main idea presented here is that society appears to be functioning on a less differentiated emotional level than 25 years ago, that this may be related to the disappearance of land frontiers. Man has long used physical distance as a way of "getting away from" inner emotional pressures. It was important for him to know there was new land for him, even if he never went to it. The end of World War II was an important nodal point in a process in which the world became functionally smaller at a more rapid rate. That was before man had much awareness of population growth. After the war, the colonial powers began to grant independence to their colonies, and it became more difficult for citizens to get away to a colony.

Man can "know" something intellectually a long time before he "knows" it as part of his total being. The main sensory modalities that operate in the emotional reactivity of relationships are vision and hearing. It might be that television, which uses both modalities, was the most important factor in making man intellectually and emotionally aware of his earth. It was harder to doubt that his earth was one "colony" after 1969 when his television screen took him on an audiovisual tour of the moon with his planet Earth in the background.

When I first developed the differentiation of self scale in the late 1950s, I expected people would group

themselves more evenly on the scale than has been the experience. With increasing experience with a wide range of people, there is evidence that most of the population is below 50 on the scale. The population is distributed with most in the 20 to 45 scale range, with a small percentage above 50, and the highest levels in a decreasingly smaller group up to a few in the 65 to 70 range.

A person low on the differentiation scale has a well functioning intellect but intellect is intimately fused with his emotional system, and a relatively small part of his intellect is operationally differentiated from his emotional system. He can accurately "know" facts that are personally removed, such as mathematics and the physical sciences, but most of his "intellect" is under the operational control of the emotional system, and much of his total knowledge would be more accurately classified as an intellectual emotional "awareness," without much differentiation between intellect and feelings. He may have had some distant intellectual awareness, from school and science exhibits, that the earth is a planet, but his first real "awareness" came when he could "experience" it with his intellect and his total emotional, cellular self, all at the same time, during the Apollo space program. The person at this level of differentiation does not commonly have a clearly formed notion of *fact*, or differences between *truth* and *fact*, or *fact* and *feeling*, or *theory* and *philosophy*, or *rights* and *responsibility*, or other critical differentiations between intellectual and emotional functioning. Personal and social philosophy are based on the *truth* of subjectivity and life decisions are based more on feeling and maintaining the subjective harmony. A high percentage of the population, probably a majority, are in various sub-groups of this broad category. At the lower levels of differentiation are those whose intellect is so submerged in the emotional system that intellect operates more in the service of the emotions than separately. They come nearer "experiencing" the world through the emotional side of their fused intellectual-emotional system than "knowing" through their intellect. They learn best by "experiencing" new situations. They are probably more accurate when they say, "I feel that. . ." about an intellectual opinion or conviction than if they used "I believe that. . ." They live in subjective worlds in which lives are vulnerable to symptoms when anxiety is high.

**Societal projection process:** The family projection process is as vigorous in society as in the family.

The most interesting of the new group of "sick" people are criminals. Society has followed the same course in dealing with people who seriously offend society, as anxious parents in dealing with the difficult teenaged child. Like the parents, society (the people who make up society) has an overall over-emotional involvement with impaired children which helps to create the orientation for later criminal behavior.

When the first anti-social act occurs, society follows the same feeling oriented, "bandaid" type interim action as parents who hope the problem will go away. The same posture continues through successive offenses, multiple arrests, trials, imprisonment, "rehabilitation programs" that fail, etc. During the past 20 years, an over-lenient society has passed laws and made rules that further foster the development and preservation of criminals. The total trend is seen as the product of a lower level of self in society. If, and when, society pulls up to a higher level of functioning, such issues will be automatically modified to fit the new level of differentiation. To debate such a specific issue in society, with the amount of intense emotion in the issue, would result in non-productive polarization and further fixation of current policy and procedures.

The most vulnerable new groups for objects of the projection process are probably welfare recipients and the poor. These groups fit the best criteria for long-term, anxiety relieving projection. They are vulnerable to become the pitiful objects of the benevolent, over-sympathetic segment of society that improves its functioning at the expense of the pitiful. Just as the least adequate child in a family can become more impaired when he becomes an object of pity and over-sympathetic help from the family, so can the lowest segment of society be chronically impaired by the very attention designed to help. No matter how good the principle behind such programs, it is essentially impossible to implement them without the built-in complications of the projection process. Such programs attract workers who are over-sympathetic with less fortunate people. They automatically put the recipients in a "one down" inferior position, and they either keep them there, or get angry at them.

### **Emotional systems theory view of the environmental crisis**

For some twenty-five years there has been growing evidence that the human race is on a collision course with the environment. This evidence is different from evidence in past centuries when certain people have declared that the world is on its way to Doomsday or Armageddon. My area of expertise has been the ways man reacts to crisis, and especially his emotional reaction to increasing population density. My conclusion is that mankind is rapidly moving into a crisis of unparalleled proportion, that the crisis will occur in successive steps more easily seen in retrospect than foreseen, that the final crisis will be "unexpected," that man's failure to deal constructively with the crisis will be the result of his emotional blindness, that the crisis is as close as the middle of the next century, and that it will be the end of civilization as we have known it over the past few thousand years. This conclusion is the result of

'stretching" existing thinking as far as it can be stretched at the moment, and of educated guesses based on knowledge about the functioning of man's emotional system. A spectrum of variables can modify this course, and science has not yet developed to the point that all variables can be anticipated. Thinking about the various stages of the crisis is based on the predictable ways man deals with emotional crises in his own family. It is possible to predict crises years, or decades, or even generations before they occur. People involved in the crisis react predictably. The largest group accepts the prediction superficially, makes superficial adjustments, uses the first sign of change as evidence of success, and then relaxes the effort until a new and more intense crisis occurs. It is factual that almost any effort to modify a crisis results in an initial favorable result. The crises repeat with increasing intensity, with the same assumption after each that the problem is solved. The final collapse then comes as a "surprise" at a time when things appear to be going well. In retrospect, it is possible to see each crisis as another step toward the final collapse in family structure. Another group accepts the prediction of crisis more seriously. The group makes serious efforts to modify the problem but it goes through the motions of change that are not quite successful. The various stages are less frequent, and the timing of the final collapse is postponed, but there is the same "surprise" at the final collapse and the final endpoint is the same.

### **Comprehensive decision-making**

Man does not know enough to more than scratch the surface of the total environmental problem. It is only in the past two decades that man has had much awareness of the problem, and only in the past decade has he been motivated to take action to correct it. It is necessary to deal with the immediate problem now, with the knowledge available now, but any action taken now may eventually prove short-sighted and miss critical factors not well understood. High priority should go into broadly conceptualized research with adequate funding to support it. The long-term future of mankind is probably more important than many "here and now" situations. There are too few trained

in systems thinking, especially in the area of understanding man himself. The research will attract gifted young people. As the environmental crisis becomes more intense, people who are knowledgeable and scientifically calm will be helpful to all society. The area of social research designed to study the nature of man in relationship to his environment should have special priority.

**Public education:** The more the whole of society can know about all the various theories that apply to the environmental crisis, and the difficult alternatives that face man, the better. An emphasis on research will lead automatically to better public education, and better public education will lead to new courses in schools and a more knowledgeable future generation, and finally to a new generation of political officials with values more in harmony with the future. Hopefully, a new ethic of respect for nature will come from education.

**How to implement the program:** An important element in this is public education. The average person expects the same kind of "instant answers" that are possible in solving technical problems. Man does well at solving problems outside himself but he is inept at solving problems dominated by the emotional system. The average person will go into this expecting to find a solution in a fixed period of time, unaware that change involves changing basic characteristics in self. A goal in this is to keep society working, without denying the problem is solved and without going into a panic. Even with this, it is likely the environmental problem will proceed in stages and finally come to the last "unexpected" state of disintegration. The main ally in finding a solution is in the most mature, best integrated segment of society that is capable of acting maturely and treating this as a problem that can be solved. The opposite is to avoid the fairly predictable course of man in dealing with emotional problems. In a family or small group, one motivated person can keep working, slowly changing self to a more mature and responsible person, and gradually influence others to change. A goal in society would be to keep the most mature segment of society working in spite of the irresponsible "emotion dominated" orientation of the less mature segment of society.