

### **III. THE PROBLEMATIQUE: AN OVERVIEW OF THE SITUATION**

#### **1. THE IDEA OF "PROBLEMATIQUE"**

It is in the nature of our languages, hence of our manner reality, to see and call the dissonant elements in a situation, "problems".

Similarly, we proceed from the belief that problems have "solutions" --although we may not necessarily discover these in the case of every problem we encounter. This peculiarity of our perception causes us to view difficulties as things that are clearly defined and discrete in themselves. It also leads us to believe that to solve a problem it is sufficient to observe and manipulate it in its own terms by applying an external problem-solving technique to it.

Although it is true that there are certain problems (mostly in the field of technology and engineering) that can be dealt with in this way, it is also becoming quite evident that such problems are no longer the most important ones with which we must deal.

When we consider the truly critical issues of our time such as environmental deterioration, poverty, endemic ill-health, urban blight, criminality, etc., we find it virtually impossible to view them as problems that exist in isolation --or, as problems capable of being solved in their own terms. For even the most cursory examination will at least reveal the more obvious (though not necessarily the most important) links between problems. Where endemic ill health exists, poverty cannot easily be divorced from it, or vice versa. Certain kinds of criminal behavior often, though not always, seem to be related to poverty or slum living conditions. Furthermore, if we try to solve any such problems exclusively in their own terms we quickly discover that what we take to be the solution of one category of problem may itself generate problems of another category (the reduction of death rates in developing areas and the resultant increase in poverty, public unrest, overpopulation, etc., is a good example of this single avenue approach).

Another unfortunate consequence of the preference we display toward orthodox problem-solving is the misapplication of effort and energy. Thus many agronomists devote a great deal of ingenuity toward increasing the yield per acre of our crops without seeming to realize that the particular solution called "agriculture" may possibly no longer represent the single, feasible resolution of the problems clustered under words such as "hunger" or "malnutrition" when the latter are considered in their world-wide dimensions. It seems reasonable, therefore, to postulate that the fragmentation of reality into closed and well-bounded problems creates anew problem whose solution is clearly beyond the scope of the concepts we customarily employ. It is this generalized meta-problem (or meta-system of problems) which we have called and shall continue to call the "problematique" that inheres in our situation.

#### **2. TOWARD A GENERALIZED RATIONALE**

The fragmentation of reality caused by our conceptual and linguistic makeup notwithstanding, it is still necessary to talk about the situation and to communicate ideas concerning it. Since we have no new language for doing this, we can only approach the notion of the problematique in

terms that are familiar to us. We can break down the problematique into its major components and we can list such components, both for purposes of their tentative identification and of creating a referential base, under the title of Continuous Critical Problems. The listing that follows represents a general statement of the most commonly recognized problems of this sort.

### CONTINUOUS CRITICAL PROBLEMS: AN ILLUSTRATIVE LIST

- 1) Explosive population growth with consequent escalation of social, economic, and other problems.
- 2) Widespread poverty throughout the world.
- 3) Increase in the production, destructive capacity, and accessibility of all weapons of war.
- 4) Uncontrolled urban spread.
- 5) Generalized and growing malnutrition.
- 6) Persistence of widespread illiteracy.
- 7) Expanding mechanization and bureaucratization of almost all human activity.
- 8) Growing inequalities in the distribution of wealth throughout the world.
- 9) Insufficient and irrationally organized medical care.
- 10) Hardening discrimination against minorities.
- 11) Hardening prejudices against differing cultures.
- 12) Affluence and its unknown consequences.
- 13) Anachronistic and irrelevant education.
- 14) Generalized environmental deterioration.
- 15) Generalized lack of agreed-on alternatives to present trends.
- 16) Widespread failure to stimulate man's creative capacity to confront the future.
- 17) Continuing deterioration of inner-cities or slums.
- 18) Growing irrelevance of traditional values and continuing failure to evolve new value systems.
- 19) Inadequate shelter and transportation.
- 20) Obsolete and discriminatory income distribution system(s).
- 21) Accelerating wastage and exhaustion of natural resources.
- 22) Growing environmental pollution.
- 23) Generalized alienation of youth.
- 24) Major disturbances of the world's physical ecology.
- 25) Generally inadequate and obsolete institutional arrangements.
- 26) Limited understanding of what is "feasible" in the way of corrective measures.
- 27) Unbalanced population distribution.
- 28) Ideological fragmentation and semantic barriers to communication between individuals, groups, and nations.
- 29) Increasing a-social and anti-social behavior and consequent rise in criminality.
- 30) Inadequate and obsolete law enforcement and correctional practices.
- 31) Widespread unemployment and generalized under-employment.
- 32) Spreading "discontent" throughout most classes of society.
- 33) Polarization of military power and psychological impacts of the policy of deterrence.
- 34) Fast obsolescing political structures and processes.
- 35) Irrational agricultural practices.

- 36) Irresponsible use of pesticides, chemical additives, insufficiently tested drugs, fertilizers, etc.
- 37) Growing use of distorted information to influence and manipulate people.
- 38) Fragmented international monetary system.
- 39) Growing technological gaps and lags between developed and developing areas.
- 40) New modes of localized warfare.
- 41) Inadequate participation of people at large in public decisions.
- 42) Unimaginative conceptions of world-order and of the rule of law.
- 43) Irrational distribution of industry supported by policies that will strengthen the current patterns.
- 44) Growing tendency to be satisfied with technological solutions for every kind of problem.
- 45) Obsolete system of world trade.
- 46) Ill-conceived use of international agencies for national or sectoral ends.
- 47) Insufficient authority of international agencies.
- 48) Irrational practices in resource investment.
- 49) Insufficient understanding of Continuous Critical Problems, of their nature, their interactions and of the future consequences both they and current solutions to them are generating.\*<sup>1</sup>

It should be evident that these Continuous Critical Problems are meant merely to serve as general labels under each of which entire trees or clusters of issues that appear analogous, can be classified. Further, neither their rate of occurrence nor their intensity is uniform throughout the world. Therefore, the causality structure that underlies such a listing is obviously of extreme complexity and actually impossible fully to ascertain through mere observation for, even on direct empirical evidence, it is clear that the true list must be many times larger than what we have given.

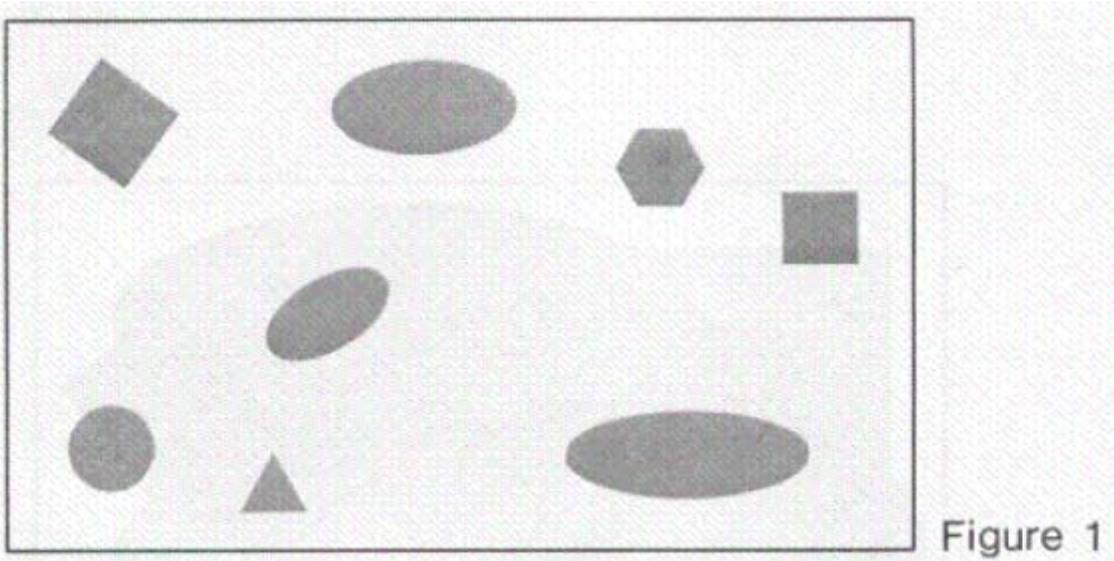
However, even from this limited listing we begin to sense that these large problem-areas are system-wide, interdependent, interactive and intersensitive; that they transcend national frontiers, or even regional boundaries; and that they are seemingly immune to linear or sequential resolution.

This, in turn, suggests that when the problem-trees have grown to world-wide proportions their branches intertwine --or, if we use the image of clusters, we can say that the clusters overlap. Such areas of overlap then create new problem-areas whose description (hence our understanding of them) escapes the boundaries of the original taxonomy. Therefore, the line of approach to be taken must first aim at clarifying the systemic character of the problem-areas, and secondly, must re-state them in a way that will make their most critical synergies visible.

The five frames that will be found on the following two pages are an attempt to give a graphic portrayal of this dynamic and interactive growth of the problematique. In each of the frames the problem-areas are symbolized by differently shaped shaded spaces.

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<sup>1</sup> \* These Continuous Critical Problems are not listed or grouped in any particular order; nor is the list to be regarded as complete.



**Figure 1** merely represents an arbitrary and random positioning of such problem-areas, with the aim of describing a situation wherein the visible interactions among the conjuncture of problems is patently weak or, even probably, non-existent. Such situations have often been experienced in the past especially if they were being viewed in terms of the whole world as the context within which the singular problem areas were evolving.

It is with reference to this type of situation that our problem-solving methods were developed. And they consist in attacking each of the problem-areas separately and in attempting to find discrete solutions in each such area. This analytic habit continues to hold sway over our minds, despite the fact that we have, by now, recognized the existence of certain contiguities among the problem- areas. Such contiguities have become manifest some time ago, and are no doubt due to the growth of the problems --although this growth has displayed different rates in its momentum, and has occurred along different vectors (**Figure 2**).

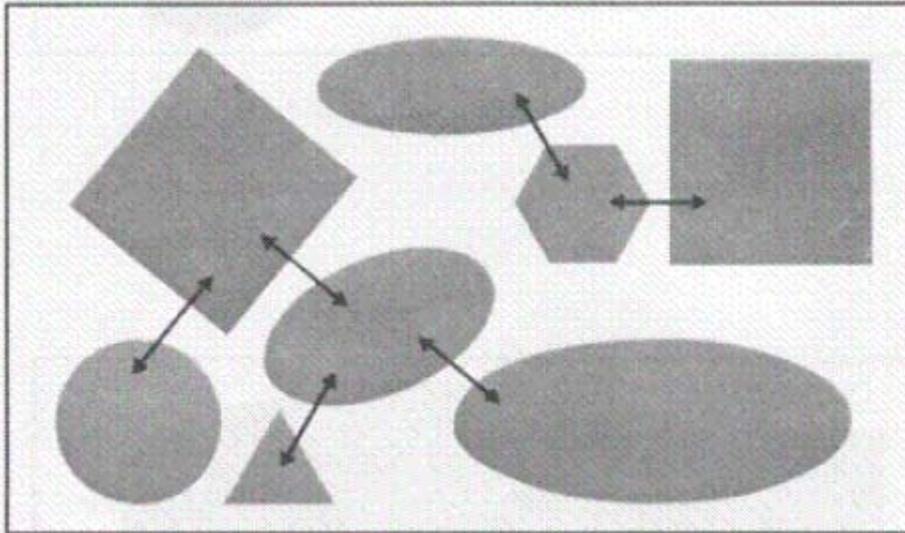


Figure 2

The continuation of these trends would seem to have turned such contiguities into clusterings and overlaps (**Figure 3**), which we may perceive superficially but whose real structure and dynamics escape us. In actual fact the situation tends increasingly to appear as a single complex system whose internal relationships, interactions, fields of force, and overlaps are extremely confused (**Figure 4**) and impossible to delineate without a very serious attempt to model it in its entirety. Such a modeling effort could, for example, reveal the morphology of the situation as resembling what is shown in **Figure 5** --namely, as having a composite dynamic core, and differing intensities of interfaces and relationships, all of which must be identified and organized into a unified frame of perception and understanding.

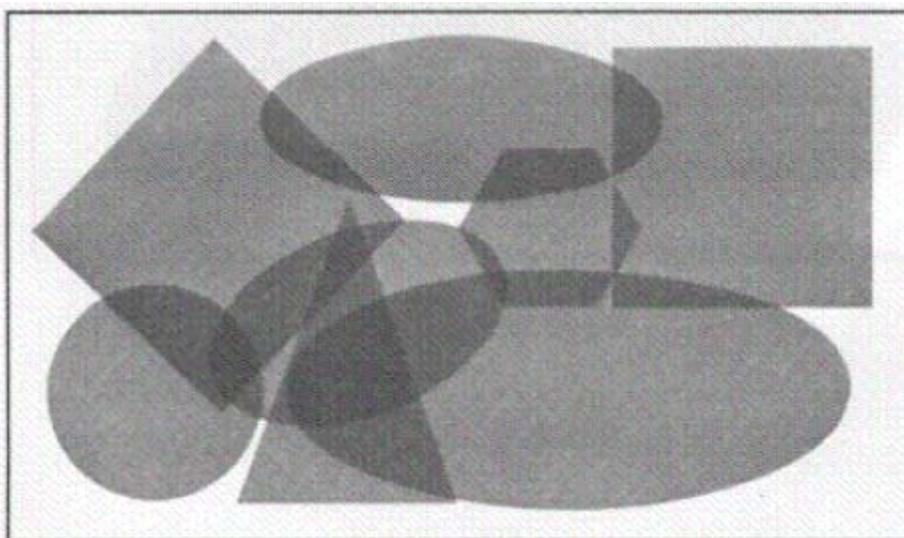


Figure 3

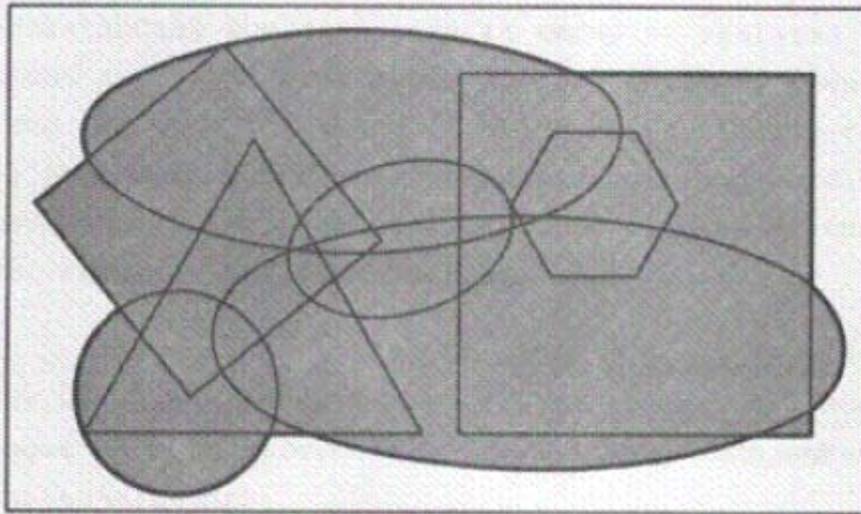


Figure 4

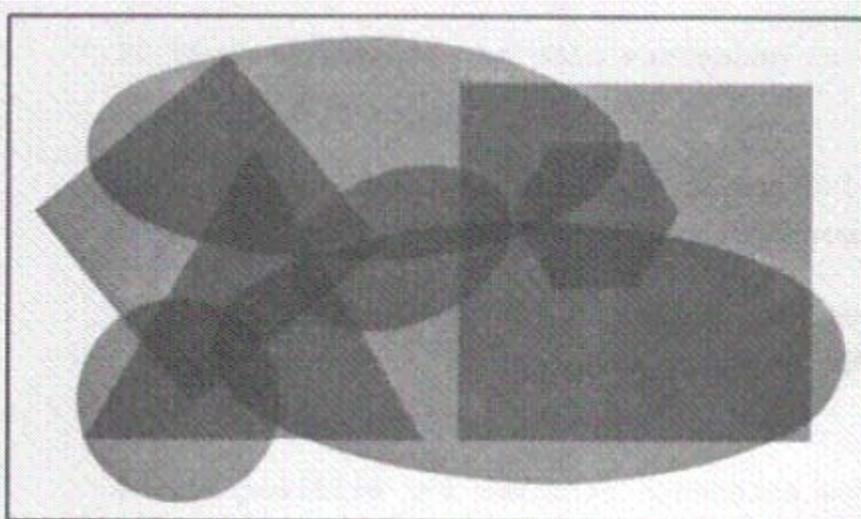


Figure 5

Such an approach -- which can only incompletely be communicated in two-dimensional drawings -- is clearly needed and clearly important for it now appears possible to surmise that attempts at understanding the situation in terms of isolated problems have gone almost as far as they can. If this be true, then, greater effort along the same lines should teach us but little that is new about the phenomena which make up the issues, and hardly anything at all about the living, changing, dynamic texture of the interconnections that actually create a "situation".

If we are to learn something new it would appear, therefore, that we need to create one or more situational models which might reveal --with reference to, but almost independently from, the problem-clusters:

- the identity of the most critical and sensitive components of the situation;
- the main or major interactions that exist among the various variables contained in the situation;
- the behavior of the main variables in relation to within the situation;

- the time-dependent ordering of the chief possible out- comes and of their present consequences for action;
- the presently invisible critical connections that operate systemically within the present situation and that situation's future configuration;
- the positive and negative synergies that must exist among various alternative consequences and options.

Factors such as the above can be explored because, by means of modeling the situation correctly, it becomes feasible (1 to penetrate the areas of interdependence among problems and clusters of problems; (2 to manipulate the models artificially -- so as to observe the behavior of the situation's components under differently structured configurations. After the modeling work has been completed it should be possible to elaborate suggestions for curative or corrective action that might prove helpful in developing policies. However, to be taken, all these steps require that a ground be established upon which the entire modeling effort can be made to rest. Such a ground is what we shall refer to as the "value-base."

### **3. THE VALUE-BASE**

The primary aim of modeling is to give the subject a shape, a structure, a configuration that is determined by an objective which, itself, is external to the subject. Hence the clarifications or insights that might be obtained from a successful modeling effort are never reached in terms of the subject {i.e., a problem or a situation) but in terms of the external objective to satisfy which the modeling was undertaken in the first place.

Such an objective always entails a value, and the setting of it must therefore create the particular value-base that gives meaning and direction to the whole endeavor.

A value-base explicitly stipulates certain assumptions about what is "good" and what "bad."<sup>2</sup> In the past, it was not always necessary to make such a stipulation because a problem could be recognized clearly and singularly as a problem and therefore fell automatically into a negative value category. This is not the case nowadays when we must deal with the problematique of a whole world-wide situation. In so extended and complex a problem area the value premises reveal themselves as being so confused that it becomes imperative to define a value-base that will govern the work from the very outset.

The value-base to be selected must satisfy certain fundamental criteria. First, it must qualify as a heuristic tool-concept that can be used throughout the study. Secondly, it must be consonant with the initial perceptions and beliefs that have triggered the work. Thirdly, it must support, and in some sense justify, the outcomes that are expected from the effort. The second and third criteria have already been elaborated throughout the preceding pages; nevertheless, it might bear repeating here that the ground of pre-suppositions from which we shall start is the belief, backed

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<sup>2</sup> This manner of proceeding is actually implicit whenever we say that something represents a "problem". When we call occurrences such as hunger, or over-population, or lack of education, "problems" we are in fact defining them in this way because according to our value system they represent a state that is bad , in comparison to an alternative possible state --which we call "solution" -- that we accept as being good.

by considerable empirical evidence, that there are strong interactions among the events which create our situation and that, while it is impossible fully to isolate the former, it should be feasible to identify, through modeling, some critical aspects of their temporal and spatial morphology. And, moreover, that such identification might also permit us to anticipate a number of dissonances which may not exist at present, but whose developing conjuncture could well be forming those new issues and problems which will define our future.

It is on this ground of perceived fact and belief that we must now evolve the value-base of the work, as a heuristic tool-concept that will satisfy the first criterion stated above. This can be done with reference to the nature of the problematique itself, that is, with reference to the most general attributes we find in those component elements of our situation that we have called Continuous Critical Problems. When we review these (even superficially) we find that all of them are problems in relation to something else -- either other problem-clusters or a particular state of the system in terms of which we look at them, or values we take for granted because they are embedded in our current culture. Thus, for example, uncontrolled population growth is a problem when viewed in relation to a particular state of the environment that we are now experiencing. It was not a problem when we experienced the environment differently; namely, in a different state of the overall system. Such examples can be multiplied, and if they are we shall notice that in every instance the problematic element derives from an imbalance that affects the relationships existing among situational components.

This observation cannot but remind us directly that imbalance is a state which defines the pathology of an "ecological" system, which, in fact, our situation, seen in its entirety, represents.

Ecology, as one hardly needs to note, is the study of the equilibria and the dynamics of "populations" of living entities within given environments. The notion can be extended and generalized to comprise the equilibria and the dynamics of all entities, for every dimension of contemporary experience is a definable population of facts and concepts: biological, physiological, physical, psychological, ethical, religious, technological, economic, political, national, international, communal, attitudinal, intellectual, institutional...; the full list is no doubt finite but very long indeed. It covers everything and event among which relations of mutual determination, complementarity or competitiveness can be established.

Hence if we extend, as is increasingly being done nowadays, the definition of ecology to comprise the dimensions of occurrence in our world-wide environments it becomes possible to say that we are confronted with a problematique which is ecosystemic in character. The normative statement that describes the value- content of any ecosystem is "ecological balance." Consequently it is the idea of ecological balance that can, and will, be taken as the underlying value-base of the study; for in the terms dictated by our situation the "good" is self-evidently and most generally capable of being defined as the re- establishment of that many-dimensional dynamic balance that seems to have been lost in the modern world.

Given the general conditions of this study, such a value-base should make it possible to develop models and attain insights that have global relevance, and should further open the way for the integration of the models into one primary synthesis capable of providing ideas that,

subsequently, can be made actionable in terms of concrete policies, of new structures, and new institutions.

#### **4. CONCLUSION**

The points that have just been touched upon amount to saying that: apart from the reasons of urgency for which the study is being recommended its only a priori hypotheses arise from the recognition of the problematic as possessing world-wide dimensions and therefore systemic characteristics, and that the functional attributes of today's world system necessarily involve normative elements which, being planet-wide, transcend sectoral, political, or regional differences; and the recognition that our current methods of description as well as our social and institutional structures are not designed to operate effectively in a system which is world-wide.

It should be repeated in order to emphasize the point, if for no other reason, that the approach briefly described above is non-political be it in motivation, in methodology, or in its initial results. Its aim is to create new clarificatory models of the known and already described components of our complex problematic situation so that the subsequent activity of policy formulation may be facilitated or even made possible. It represents a step forward in relation to the present state of affairs, inasmuch as the current ways of describing our situation do not allow of any rational or effective attempt to grapple with the fundamental political considerations to which all insights and conclusions must ultimately be reduced.