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The Extended Social Field and its Informational Structure[1]

"No man is unto himself an island." -

Donne.

The concepts of "personality" and "social structure" have come to represent the higher levels of theorizing in psychology and sociology respectively. It has always been clear that a very broad gap existed between these concepts. Unless, or until, this gap was bridged a great many socio-psychological phenomena were left in a conceptual no-man's-land. Such phenomena included the so-called collective behaviors (mob behavior, fads and fashions), cultural phenomena and the characteristics of linguistic communities.

Early attempts to bridge this gap postulated a group mind. The concept of a group mind was short-lived. As a concept it drew together the phenomena to be explained but assumed an entity that was itself inexplicable. No-one could suggest how an entity such as a group mind was to be scientifically validated, that is, how it could be proven to have an existence independent of the phenomena it was supposed to explain.

Since that failure in the early 1920s psychology and sociology have gone their own ways; the former to regard the social nature of human beings as a secondary feature to be explained, eventually, by general laws about biological organisms; the latter to regard psychological phenomena as essentially epiphenomena generated by sociological processes (Asch, 1952; Trist, Vol.I:539-45). Even up to the present day there has been no change if we are to judge by a recent, and approving, report on "current trends in

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social psychology" (Argyle, 1994).

This paper suggests that there is a scientifically acceptable referent to perform the task that a group mind was supposed to do. Two steps are required. First, it is necessary to follow Asch (1952) in establishing the social nature of human beings. Second, it is necessary to invoke Sommerhoff's (1950) concept of directive correlation to explain the individual's essential role in non-random social behaviors.

Asch's contribution was to identify the properties that arise in a situation where two people (*A* and *B*) enter into relations to each other with respect to some object or event (*X*) in which they are both interested. Invoking the concept of interest implies no more than Trotter (1919) postulated in his *Instincts of the Herd in War and Peace*, namely, that *A* and *B* are of the same species and hence (a) are specially sensitive to the behavior of their fellows and (b) will tend to resist separation from their fellows. Interest does not necessarily imply anything about physiological drives.

A time ordered series of four properties emerges within and *ABX* setting:

1. The *ABX* setting presents an objectively ordered field open to both participants (Emery, Vol.III). Each can see what *X* affords to him and what *X* affords to the other.

2. The mutual confrontation of *A* and *B* vis-a-vis *X* attests to their basic psychological similarity. Each comes to the situation with intentions, attitudes and beliefs that can be known by the other. In particular, each becomes aware of the other as a potential agent of change in the field.

3. Stages 1 and 2 lead to the emergence of a mutually shared psychological field. *A*'s actions in the context of this shared field are the context of *B*'s actions and vice versa. In this

mutual representation of one's own and of the other's orientation to the situation we have, as Asch (1952:161-62) stresses, the primary social fact. It is only on this fact that we are able to establish persisting social relations of coordination and control.

4. Within mutually shared psychological fields the individual psychological systems more clearly take on the characteristics of an "open system." To achieve their ends with respect to *X* both *A* and *B* have to co-relate their behavior to the behavior of the other; they have each to consider where they start from, what each can do and where each wants to end up. In Sommerhoff's terms the behaviors of *A* and *B* have to become directively correlated if either, or both, are to achieve their goals with respect to *X*.

We have until now taken the simplest case of ABX. There is no problem in principle of extending the concept of directive correlation to *ABCX* or *AB...nX*. A field of directive correlations does not have the unitary perceptual qualities of a thing such as a human being or an engine. Nonetheless, such a field is not an empty abstraction such as a group mind. A field of directive correlations can be specified with respect to the coenetic (starting) conditions, the focal condition in the processes that leads to their convergence over time and the outcomes of the processes that were set in motion by the coenetic conditions. This is not a summation of separate cause-effect chains as it involves the joint effect of processes that respond to the coenetic conditions according to their own laws. But, as Sommerhoff has demonstrated, such convergent, goal-directed sets of processes are typical of all living systems and they can not only be specified but they can be measured and manipulated. The group mind concept failed to meet these requirements.

The increased openness of individuals that occurs in a mutually shared field is critical for what we will argue, therefore we should be clear about what it entails. By greater openness we shall mean that the individual

is responsive to a greater range of coenetic variables. The individual's range (repertoire) of responses is better treated as a measure of sensitivity than of openness and the range of goals and sub-goals as a measure of system complexity. Thus a system might be very open but relatively insensitive and single-minded or relatively closed but highly sensitive and complex because of the range of goals being served.

The Assumption of an Extended Social Field

The increased openness of the personal systems which arises in a mutually shared field permits the emergence of a spatially and temporally extended field that seems to have genuine system properties. This not only implies the *temporal* and *spatial* extension of the *ABX* situation for *A* and *B* jointly, but also their involvement with distant others.

Given the multitude of ways in which the individual system establishes short-, medium- and long-term directive correlations with its physical environment in order to meet its physiological requirements, it requires only the development of this openness, this special sensitivity to others as similarly oriented action centers, for the individual to be involved and to feel that he is involved in a field of directive correlations that extends beyond his perception and beyond his control. The network or mesh of interlocking directive correlations implicates the individual's behavior--as well as his fate--in events taking place outside his immediate psychological life space. A husband, even while at work or traveling in distant places, is in some ways still implicated in the daily home setting of his wife and the school setting of the children. He is also implicated in conditions existing well back in the past (the past of others as well as himself) as these have created or failed to create present opportunities. Similarly, the future becomes immediately relevant as one acts to set in motion chains of joint action that may or may not converge or diverge in the future. It seems obvious that the spatio-temporal extension is

of a greater order of magnitude when the coenetic variables of one's directive correlations are enduring human action centers (with the characteristics of local causality and equifinality) rather than stones, tables, etc. This is nowhere more strikingly illustrated than in Heider's (1958:101) discussion of hatred:

> If a person is in danger from a rolling stone he has some chance of escaping by changing immediate conditions--the stone will not make corresponding moves to cancel out the effects of his movements. However, if he is in danger for his life because of the hatred of another person, there is no such ready solution. No matter what moves he makes for his self-protection, there is still the possibility that the would-be assassin will find the means to get at him. Just so long as the other retains his life and his hatred then the victim will go in some fear for his life. In the hatred there persists, over a wide environment, conditions that are convergent on the end-state, and if the assassin has the power that end-state will eventually occur no matter what the victim does.

We should not dismiss this with the thought that "of course, if such a person had a great deal of social power then...." The author had occasion to document a case where a prison official, sound in mind and powerfully built, went in great terror of a "life" prisoner whom he felt would one day get him, no matter how often he transferred to other prisons, unless he resigned from the service and emigrated. The incredible way the prisoner had managed to get transferred after him within the national prison system gave him grounds for terror.

Thus the extended social field is not something that, for the individual, simply extends relatively further out than his own perceivable field of action, but something that extends to the horizon of possible human

action. No behavior takes an individual out of this field, although it may change his relation to it. (See Greco's [1950] critique of Sherif and the theory of individual *plus* social motivation.)

In adapting to this field the individual is not simply adapting to one of the organized groupings within the field. These organized groupings are coordinating, integrating arrangements of only parts of the field with respect to limited focal conditions (cultural practices) and goals. The goals served by the extended field seem to be nothing less than the survival of the population of the kind of individual system of which it is composed within the range of conditions that confront them.

For our purposes it is not relevant to consider the factors that influence the size and degree of interdependence of human communities. What is relevant is that the field of directive correlations is at least coextensive with these communities and reaches back into the their history. The individual's involvement in this field has no class boundaries or limits short of the spatio-temporal limits of the community. The limits of the community--whether tribe or nation or something more--is a question that would need to be considered elsewhere, as would the question of how far this involvement spreads across such boundaries.

Nor is the field of directive correlations to be equated with a spatio-temporal distribution of objects and persons such as we may see with our own eyes when we look about at a social gathering. In the latter case we might well think that the appropriate questions about the environment are ones like those posed by Chein (1954): "How rich is the environment in stimuli, cues, goal objects, noxiants, supports? What ordering is there of these characteristics into goal paths?" The field of directive correlations is a field of psychological forces, not just a spatio-temporal aggregation. It arises from, and is sustained by, a number of independent systems which are set to monitor each other and act in ways that are jointly a function of the others' acts and their own desired ends. The field is thus intrinsically connected, not simply collected by an act of observing. In fact, it requires

much more than a glance to recognize a field of directive correlations. The ties between these active parts of the field are not visible physical ties such as contribute to the mechanical unity of an organism or simply ordered physical arrangements such as appear in a magnetized array of iron filings; the ties are mutually related predispositions. These ties tend to be masked from direct observation, such as glancing around a social gathering, by the very variety of behaviors that are brought into play by each individual to create those focal conditions required for goal attainment. The source of the observed variety as in a social gathering tends to be located in the highly visible centers in the field (the *figures*) not in the visual *ground* formed by the systems of directive correlation between them.

This field carries within it a great many of the necessary and sufficient conditions for each system to establish its directive correlations. Being based on predisposition, i.e., on persisting system properties, this field is also persistent but, as we have just suggested, the persistence is not simply a matter of physical distribution in time. The field does not go out of existence for the individual system, even if the latter is physically isolated. Equally, the field may fade away for the individual even though he is in close physical contact with others (e.g., the loneliness of the city for the outback visitor). The critical factors for the individual, arising from the existence of this field, are how well he is able to establish directive correlations, and whether the others are able and willing to do so. Those system changes which render an individual incapable are those that correspond to death (Sommerhoff, 1950). It is unusual for an individual to be totally excluded from the social field but where this does happen, as with the "pointing of the bone" in certain Australian tribal groups, it makes little difference to him whether he is physically in the encampment, near it or far away; he folds up and dies (Cannon, 1957). The phenomenon appears to persist in modern urban life (Lynch, 1977).

For these reasons, we find many behaviors that are social in character and can be explained neither simply by reference to a concrete face-

to-face group nor by some concrete and limited manifestations of the field in a crowd or organization.

This persistent and pervasive mesh of interlocking directive correlations is as much an objective part of an individual's environment as is the gravitational field. It also exists independently of him. It is there when he arrives in the world and when he leaves it, it may be different as a result but it will not cease to exist. It is there when his social formations collapse and it is only from this matrix--and certainly not just from any coming together of individually motivated humans--that new formations emerge.

We have noted so far that the concept of a "social field of directive correlations" cannot be equated with the social formations or institutions that arise within such fields nor with aggregations of persons. It remains to consider the properties of these fields.

Other Social Forms

Based as they are on organisms with a capacity for directive (i.e., goal-seeking) correlations, these fields have the potentiality of establishing further conditions of others, i.e., they have the potentiality of self-regulation, co-ordination and integration with respect to focal conditions that relate the field itself to its environment. As Wynne-Edwards (1962:2,11) has amply evidenced, the evolutionary process has heavily favored the survival of social fields that have developed such self-regulating processes. At this--the biological--level there can be no doubt that human social fields have always been characterized by some such self-regulation, and hence have provided some measure of freedom for the constituent members from variance in the spatio-temporal distribution of physical noxiants and rewards. In passing, it should be noted that such a field, even if it had a high level of self-regulation, would still not correspond to an individual organism as there is no complementary framework of mechanically related parts to maintain a hierarchy of integrated directive correlations. The more such a field is

based on medium-term directive correlations, rather than the long-term ones we find with ants and bees, the more misleading is the analogy of an organism.

A striking example of an extended field of directive correlations is that provided by Jespersen's study of the distribution of pelagic birds over the North Atlantic (Wynne-Edwards, 1962:2,11). Systematic observations over the vast area of 10-12 million square miles disclosed a correlation of 0.85 between number of birds in the air and density of plankton in the water. This degree of self-regulation over such an area and involving so many birds could not be maintained by a simple direct correlation between birds and food. The typical mechanism involves a directive correlation between bird and food and other bird. Thus, the pelagic bird's behavior is divided between maintaining an optimal distance from other birds, which he does by flying high up in the sky to see whether the others are on the horizon, and going down to sea level for feeding. If feeding is good the bird spends more time down low and out of sight of his neighbors. They edge in closer so that they see him. As this brings them to the good food area they spend more time flying down low. When food is scarce they stay high, and hence spread out. The variation in distribution produced by the self-regulatory process is very great--from just one bird-sighting a day in the south-central North Atlantic where plankton concentration was very low to over 100 sightings a day in the very rich plankton area of the Barents Sea.

A human social field has not, and cannot have, the properties of either an organism or an insect society. Despite this, the field not only allows some general self-regulation of the form similar to sub-human groups, but more characteristically allows for the formation of integrated groups with limited purposes (to be distinguished from geographical populations).

The formation of these groups adds further to the adaptability of the field or at least to parts of it. Tasks that extend beyond the scope of the individual can be carried out by these organized groups, and the physical environment can itself be transformed to increase the scope of the individual.

Extended Social Field as Dilemma of Man

However, while the social field is in these crucial ways adaptive, or is a condition for adaptive organized groups, it is at the same time maladaptive for the individual organism. While the chances of survival of the human species are increased by the emergence and elaboration of the social field, by the same process, the adaptation of the individual organism becomes more difficult. The crux of this contention is that the predictability of the individual's environment becomes less as his own directive correlations become increasingly correlated to lines of action beyond his immediate settings. *This unpredictability of the social network for the individual grows as the predictability and control over the physical environment increases.* This unpredictability would not have grown if, over the same long period of time, there had been a corresponding growth in ability to communicate and to comprehend the finer texture of the social field as it extended beyond the here-and-now.

From the point of view of the organism, this response to the growing unpredictability would not be without dangers. Quite simply, as one moves out in all directions from one point in a net, the number of lines increases at an alarming rate. A similarly alarming rate of increase occurs in the number of potential ties as the number of persons in a group increases. If the perceptual system has only a finite capacity to handle information, it is likely that it would quickly be overloaded by the information input required to cope with such complexity. Thus at this level of generality we are postulating a fundamental dilemma for man--*living in a social field requires continuous adaptation to the finer texture of this field but this requirement threatens to overload his perceptual system and creates negative adaptation.*

The critical features of this dilemma are:

- Both horns of the dilemma arise from the nature of man--his

perceptual system makes a field of directive correlations inevitable and yet, as a material system, it is itself finite.

- Both horns of the dilemma are constantly sustained by the need to adapt--man seeks to extend and enrich the field of directive correlations and, at the same time, to increase his comprehension of the field.

- There is, in the individual's drive to adapt to the finer texture of the field, no built-in self-regulatory features which would balance input load with information handling capacity.

Theoretically, there are several ways in which load and capacity can be balanced. Information input can be controlled by referring this information back to parts of the environment, some of which are noted as relevant if they change, some as irrelevant; some as probably likely to change, some as not probable but possible; some as impossible. At most the individual would accept only information which is relevant and at least possible. He might restrict himself to information which is relevant and probable, and be most unlikely to accept that which is irrelevant or impossible. Information can alternatively be controlled at point of receipt, e.g., "color blindness." If input is thus controlled by some internal state, overload might be rendered unlikely, but adaptation would be at risk. This probably cannot be a sufficient solution. Neither does the first alternative offer a solution. Although the individual can learn that some things are relevant and others irrelevant, questions of local relevance can be established only by exploring further in the social field. The field is composed of relatively independent (although correlated) action sources, and hence is unlikely to show a simple convergent structure--converging on a few sources of relevant information. Hence, control of input by the criteria of relevance may lead to an increase in required input. These are not exclusive

alternatives, so in fact we will tend to find:

- Restriction to what is relevant and probable.

- Positive motivation against knowing too much or accepting the new. (See Schachtel [1959] on socialization to curb curiosity, and Plato's Republic on the functions of myth.)

We are thus suggesting that the dilemma facing the individual in a social field is not soluble by the individual acting on his own resources and yet *some solution needs to be found if he is to survive*. From the point of view of the social field, its own adaptation is threatened by this dilemma since it is dependent upon some minimum proportion ("elite") of its constituent individuals. The survival of the social field could be undermined by a high rate of breakdown or instability in individuals, particularly in the elite, or if too many were absorbed in a constant search of the neighboring social fields to the exclusion of acting with respect to their physical environment (e.g., too many priests and scholars).

One would expect that the survival of human communities in their physical environment has been critically dependent upon how they have acted to resolve this human dilemma. The theoretical solutions discussed above are not mutually exclusive, although the determination of relevance and possibility would seem to be the least unsatisfactory solution. More important than the relative emphasis on these solutions is the fact that one side of the dilemma stands out as the side that has been most easy to handle historically--the fine texture of interlocking directive correlations extending beyond the individual's immediate setting. The facts of this texture are more immediately relevant to the individual than to the survival of the field. Hence the most important single constraint that can be effected to preserve the social field and protect the individual from his own condition is to deny as far as possible the criterion of personal relevance of these facts, and to

establish as the dominant criterion of relevance that which is relevant to the survival of the social field or some part thereof.

We are inclined to hypothesize that this is what has been done in the evolution of human society.

However, as we have discussed earlier, the social field is a physical reality for any individual--one can turn away from it but cannot act in complete disregard of it. What seems to operate in practice is a marked taboo on consciously discriminating the field. The field is discriminated, but people do not discriminate (become conscious of) the fact that they so discriminate. The function of discriminating the field is met by the social innovation of "leadership."

We do not wish in any way to discourage search for some explanatory facts closer to home, as it were. Nevertheless, it does seem that the perceptual system of man was evolved, in most of its key characteristics, prior to close settlement; prior to cultivation of grains. The environment for which man's perceptual system was adaptively evolved would have been basically a Type II environment. Elements of a Type III environment (Emery et al., 1974) would have been sporadic and infrequent, quite capable of being handled by the long-term directive correlations that serve the territorial behavior of other species. In that environmental context the affect system would--and apparently did--evolve to maximize the positive affect of novelty, of new knowledge. It was no burden for Arctic Indians to differentiate 20-30 different kinds of snow; no burden for Australian Aboriginals to read the minuscule signs of an animal's passage through the bush. They were adapting to a territory long known and signposted by their ancestors. They were living for limited periods of time with agents for change (other people) who were either strangers or closely defined kinsfolk. Nothing appears to have evolved that would warn and protect the individual human being from information overload. Information overload would have been sufficiently rare to be accepted as psychotic, e.g., amok with the Malaysians or shamanism in the Arctic regions.

As people moved into close settlement, "culture" or, much more recently, "civilization" has been the answer to this potentially fatal incapacity of the individual representative of the species. Our cultural and social groupings have evolved to protect man from himself--to ensure that men would not fall into the traps that took away their forebears. How they did this is suggested by the folk saying "curiosity killed the cat, information brought her back." This gives "information" a curiously twisted form. Puss is back if she stops being curious and accepts that what she is informed about is all she needs to know--"what you don't know won't hurt you." Schachtel (1959) has spent a lot of effort on trying to ferret out why curiosity disappears in the older human when it is so prominent in the young child. We suggest that Plato had already confronted and resolved this question in his discussion of the social role of mythology. More crudely, but very much to the point, we can pose and answer the riddle--"If the function of schools is to poke out the eyes of children, what is the function of universities?" "To teach Braille!" We are suggesting that the biblical tale of the Tower of Babel refers to the emergence of settled communities, not to the first skyscraper. Cultural diversity was mankind's answer to a shared incapacity. An answer that was evoked by the emergence of Type II environments regardless of whether the particular community went agricultural. We are suggesting further that the frenetic concern for organization and ideology in the twentieth century is a reaction of people to even further demands on their capacity to cope with information overload.

References

Argyle, M. 1994. "Current Trends in Social Psycholgy." *Newsletter, 4:4-10.* British Psychological Society, Social Psychology Section.

Asch, S.E. 1952. *Social Psychology*. New York: Prentice-Hall.

Cannon, W.B. 1957. "Voodoo Death." *Journal of Psychosomatic Medicine*, 19:153.

Chein, I. 1954. "Environment as a Determinant of Behavior." *Journal of Social Psychology*, 39:115-27.

Emery, F.E. 1974/77. *Futures We Are In.* Leiden: Martinus Nijhoff.

Greco, M.C. 1950. *Group Life*. New York: Philosophical Library.

Heider, F. 1958. *The Psychology of Interpersonal Relations*. New York: Wiley.

Lynch, J.J. 1977. *The Broken Heart*. New York: Basic Books.

Schachtel, E.G. 1959. *Metamorphosis*. New York: Basic Books.

Sommerhoff, G. 1950. *Analytical Biology*. London: Oxford University Press.

Trotter, W. 1919. *Instincts of the Herd in War and Peace*. Second edition. London: Fisher and Unwin.

Wynne-Edwards, V.C. 1962. *Animal Dispersion in Relation to Social Behavior*. Edinburgh: Oliver and Boyd.