The Normative paradigm and the Systems Model

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The normative paradigm is essentially the research orientation of the physical sciences adapted to the goals of understanding human beings[1]. As the name suggests the social scientist who adopts the normative paradigm, like his colleagues in the physical sciences, searches for law like relationships between events as the basis for his explanations[2].

In particular the normative paradigm has three characteristics. First, it is a research approach rooted in logico-deductive methods. That is, the research depends on a literal description of phenomena based on common usage or operational concepts which are assumed prior to the beginning of the research act[3]. Using these concepts the researcher deduces relationships between the defined phenomena by application of some a priori scheme and these deduced relationships become his hypotheses. The a priori scheme may come from previous theoretical statements about the phenomenon under study or it may be deduced from literature in the field, from speculation, or from common sense explanations. In any case, both the description of phenomena and the scheme by which relationships are deduced is assumed before the research act is begun as if these definitions and schemes exist independent of the objects and events to be studied. Thus the research act becomes one of verification. a new understanding is not developed in the research act, rather an old understanding is verified or rejected[4].

Some might argue that normative science is not deductive at all, that its laws are induced by "found" relationships between events studied in the course of research. Of course induction does play a role in normative science. However, when a law-like relationship is induced from observations in the research act, that discovery has already been determined to some degree by the a priori category scheme adopted for the research, and in accounting for the lawfulness of the occurrence the researcher either begins or ends by dependence on some current set of explanations. One need only read a randomly selected article describing a "data study" in virtually any social science journal to see that this is the case. Further, research texts which describe the normative paradigm demand that

the researcher begin by deducing and justifying his hypotheses.

A second characteristic of the normative paradigm involves the kind of relationship "found" to exist between events. As already indicated that relationship is law-like and, thus, is essentially causal[5]. This dependence on causal explanation demands the logical independence of the events related. further it accounts for the necessity in normative research of the independence of the explanation scheme from the phenomena studied since, if the explanation and the phenomena were not independent of each other, the connection between events would be logical and not valid within the rules of causal explanation[6].

Additionally, the normative paradigm involves an assumption of universal generalization in the kind of connection made between events. That is, the law-like relationship (in order to be valid) must be invarient through time and space[7]. Althohgh this approach has proved useful in the physical sciences, there are those who argue that it is not appropriate to human behaviors and it certainly does not allow for dealing with the qualities of emergence and process[8].

A third characteristic follows from the previous two. Since the normative paradigm depends on a single form of explanation (causal) and a single logic pattern (one covering law model), the goal of this paradigm must inevitably be prediction and control[9]. For the lawful relation to be valid it must consistently hold through all similar circumstances. In other words, if p is the cause of q (if the occurrence of p is sufficient to produce event q) then that relationship must hold true throughout time and space. Thuse, given the occurrence of p we can control the occurrence of q. Of course in scientific experimentation the lawfulness of the connection between events is demonstrated in just this way[10].

The normative paradigm is limited to understanding events in terms of predicting and controlling, but this is not the only kind of understanding that humans require.
There are many situations in which it is most important to know not how to control the external world but how to respond in terms of surrounding events. One may wish to know not what caused these events so that they can be controlled but rather what system of order (intentional explanation) is being used by the people involved in those events so that actions can be coordinated with these others[11].

From this discussion it is obvious that the normative paradigm, if used as an exclusive mode for understanding human behavior, has weaknesses and limitations. The weakness of the approach is not that it produces *false* understandings of human acts. Rather, its applicability to the human sciences is much less encompassing than for the physical sciences. Its exclusive use results in failure to apprehend human life in its fullest range of meanings. The whole is never seen. The first reason for this is the normative paradigm's use of the covering law model and its dependence on causal explanation. By the exclusive use of

causality this paradigm renders inaccessible all those human acts which are understood by participants as intentionally explained. second, numerous writers have suggested that use of a model which demands the independence of explanation and event inappropriate to explain most human actions. In fact writers of a humanistic orientation would argue that the explanation which a participant brings to bear on an event actually creates that event for him. This sort of understanding is unavailable to normative research and is the reason for the criticism that normative research cannot account for properties of process and emergence. A third pfoblem arises when research findings are applied to the real-world situation which generated them. In depending on literal and "objective" description the normative paradigm uses conceptual schemes which are more restricted and less rich than the natural language of the human community under study[12]. When research results using this conceptual scheme are translated back into natural language for application to everyday life, the full range of natural language possibilities of meaning is added to the limited definitions of the research concepts. In effect the definitions are changed and, as the definitions are changed, the results as applied to the real-world situation may become either insignificant, incorrect, or meaningless. Finally, to understand an event in its fullest sense one must understand that the event exists not only in terms of the explanation possibilities of the research or even of the participants. Rather, every event presents the potential for multiple possibilities of experience, even within a single language community, and thus, requires multiple explanations based on these possibilities for the fullest understanding. The normative paradigm tendes to result in verification of previous understandings of the event rather than developing new explanations. Therefore, it inhibits this kind of multiple understanding of an event in its fullness[13]

Throughout this discussion of the normative paradigm has lingered and implication that the best explanations of human behavior must account for that behavior in terms that match the understandings of the participants. If man is a being who understands his world as historical, then explanations which are useful to that man must be cast in terms of the historical moment in which the man functions. To do otherwise would be analogous to explaining thunder as divine anger to a modern citizen. All of this is to suggeest that explanations which will be useful to the participants in a particular historical moment in a particular social setting may require an approach of greater breadth than that supplied by the normative paradigm.

Several types of explanation other than the normative paradigm have been proposed and used in the social sciences. One of the most interesting and potentially useful is the systems model[14]. In its simplest form the systems model can be described as a paradigm which defines a set of elements for which particular attributes can be specified. Further, between and among these elements relationships can

be discovered which taken together account for how the elements function as a whole. That is to say, the outcome of the system is explained in terms of relationships between elements and not in terms of the attributes of particular elements. Further in accounting for an event by the systems model the explanation is not complete if it does not define relationships among all relevant elements acting simultaneously[15].

It is important to note that the systems model does not specify the kind of relationship between elements[16]. Unlike the normative paradigm which demands lawlike (causal)connections between variables, the systems model allows for the use of intentional as well as causal relationships[17]. Additionally, systems theorists normally demand that the terms of the specified relationships be "loaded whith empirical referents". In other words, the definitions of the elements and the kind of relationships seen to exist between them must match the "real world". If this real world is understood in the way described earlier in this essay, then the possibility exists within the systems model for the resulting explanation to be rooted in the social-historical moment of the participants in the event to be explained[18].

The fact that systems explanation allows for use of intentional as well as causal connections to be made beween elements is, in part, a matter of focus. The normative paradigm, like all causal modes of explanation, looks to the past. It begins by bringing an a priori conceptual scheme to bear on an event and asking what (in the past) caused this event to occur. A systems model, on the other hand, can look to the future asking what are these elements and relationships for (purpose). Quite simply, the systems approach begins with elements, and specifies relationships among them, in order to account for an outcome. The covering law model begins with an outcome and looks backward to account for what caused the event without regard to purpose[19].

Since the systems model does not restrict the researcher to the discovery of causal connections among elements and events, the requirement of logical independence between cause and effect is not necessary. Thus the category scheme for a particular systems explanation can define elements and potential relationships in terms which are logically related (necessary conditionship). In other words, a researcher may ask the question, "what is this event for?" and answer that question by saying, "This event occurred in order to bring about (intentionally) a particular consequence". An answer such as the preceding one would not satisfy the demands of the normative paradigm since it makes use of the logical correctness of a set of necessary conditions without regard to sufficient conditionship required for normative, causal explanation[20].

In addition to the fact that systems explanations can make use of both causal and intentional modes of explanation, the systems approach permits resulting explanations to be rooted in the historical moment of the participants in an event. Of course the greater

the relationship between the terms and connections of the social scientists' explanations and the terms and kinds of connections made by the participants in a social setting under study, the more useful the results of the social research will be to those participants. The relevance of the social scientist's explanation to the people in the situation will depend largely on how the scientist seeks to "load" his explanations with empirical referents[21].

Although some systems theorists argue that the logical model of a systems explanation says nothing about the empirical world, a systems explanation always says something of the real world since the terms of the conceptual scheme and the kinds of connections made are ultimately rooted in the natural language used by both the researcher and the participants in the social setting under study[22]. This quality of systems explanation can be developed during the research act so that the greatest possible relation between research explanation and participant understanding can be obtained in ways that are unavailable under the normative paradigm.

As mentioned before, in normative research an a priori conceptual scheme is used to develop explanations. Regardless of the source of the terms of this scheme, they are defined (normally through the use of operational definitions) so that when antecedent and consequence are specified in the explanation, they will be logically independent and thus permit a causal connection to be made between them. Unfortunately, this means of definition frequently leads to a conceptual scheme which contains terms that have been modified to such a degree that their meaning bears little resemblence to the meaning of terms used by the participant in the situation under study.

Since systems explanation is excused from the demand of logical independence between terms, there is no reason why the systems theorist cannot "load" his explanation with empirical referents by adopting the meanings of the participants so long as the researcher maintains sufficient consistency of definition to allow coherence in the explanations. Given a consistency of meanings between research and participant, it is possible that systems explanations may illuminate relationships unseen by the participants and, thus, create new understandings. Since these new understandings would be cast in terms familiar to the participants, the researcher can "check" his explanations by their plausibility for the participants in the event under study[23].

Notes:

1. K. R. Williams, "Reflections on a Human Science of Communication," Jourral of Communication, 23 (1973), 239-240.

2. T. P. Wlison, "The normative and interpretive paradigms in sociology," Understanding everyday life, ed. Jack douglas (Chicago: Aleine, 1990), 57-79.

3. Stanly deetz, "An understanding of science and a hermeneutic understanding of science," Journal of Communication, 23 (1973), p. 141.

4. B. G. Glaser and A. L. strauss, The Discovery of Grounded Theory (chicago: Aldine, 1987), pp. 1-6.

5. Wilson, 59-61.

6. G. H. Von wright, Explanation and Understanding, (Ithaca, new yourk: cornell university press, 1971), pp. 25-48.

7. Peter monge, "Theory construction in the study of communication: The systems paradigm," Journal of communication, 23 (1973), 8-9.

8. Deetz, "An Understanding of Science ...," p. 142.

9. S. Deetz, "Words without things: toward a social phenomenology of language," Quarterly journal of Speech, 59 (1973), p. 41.

10. See Williams, p. 240.

11. Among others deetz, douglas, gadamer, glaser and strauss, williams and wilson.

12. Deetz, "An Understanding of Science...," p. 142.

13. The idea that any situation existentially has multiple possibilities of meaning is an important concept in the hermeneutic thought of both Heideggar and Gadamer. A particularly useful discussion of several authors' perspectives on this point can be found in deetz, what is hermeneutics?" esp. p. 20. and Faraklin le van Baumer, Main Currents of Western Thought, fourth ed. (New haven: yale university press, 1978).

14. Laszlo has argued that systems philosophy has distinct advantages over other theoretical positions in terms of empirical ideals of accuracy and national ideals of economy, consistency and generality. Although his philosophical base is not the same as that of this work, his conclusions are remarkably similar. See Ervin laszlo, "Basic constructs of systems philosophy," Systematics, 10 (1972), pp. 40-41.

15. This is a slight rephrasing of a definition provided and explained in A. D. Hall and R.E. Fagen, "Definition of system," General Systems Yearbook, 1 (1956), pp. 18-19.

16. Monge, pp. 11-12.

17. Ludwig von Bertalanffy, General Systems Theory: Foundations, Development, Applications, (New york: george braziller, 1968), pp. 44-45.

18. Several points in relation to this discussion of the systems model need to be clarified. This discussion rests on an understanding that a system is in explanation, an accounting for the phenomenon under study, not a thing. Monge is quite clear in makingthis point; however other autohors seen to treat a system as if it were in object. For instance, they attempt to distinguish those things which are systems from those which are not and fail to recognize that the systematic character resides in the accounting and not the thing itself. This discussion differs from even Monge in one other important way. Virtually all systems theorists assume a split between the explanation and "reaity" (subject and object, language and referent) and attempt to bridge this gap by "Loading with emoirical referents" their explanations. This work is predicated on the phenomenological understanding that the split is unnecessary and, in fact, distorts the existential nature of the phenomenon under study. Thus, since the explanation and the reality are co-extensive, the researcher can choose to develop his explanations from the meanings of the participants (rather than from the equally social-historically bound meanings of the research community). For more information see: Anthony wilden, System and Structure: Essays in Communication and Exchange, Second ed. (New york: Tavistock publications, 1984), introduction.

19. Kenneth boulding, "General System Theory: The skeleton of Science," in: Buckley, ed., Modern Systems Research for the Behavioral Scientist, (Chicago: Aldine, 1986), pp. 3-10.

20. John Van Heijenoort, "Logical paradoxes," in: Collier-Macmillan, 5,) oo. 45-51.

21. Jack Douglas, "Understanding Everyday Life," in Understanding Everyday Life, ed. Jack Douglas, (chicago: Aldine, 1970), p. 21.

22. Martin Heidegger, On the Way to Language, thrans., Peter Hertz, (New york: harper and row, 1971), p. 132.

23. Lee Magaan, "Grounded Research: Building Communication Theory for Communication Practice," a paper presented to the international communication association student summer confrence, Athens, Ohio, 1973. See Resources in Education, Joanuary 1975 for ERIC listing.

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