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ABSTRACT

Three potentially useful perspectives for the scientific development of human communication theory are the law model, the systems approach, and the rules paradigm. It is the purpose of this paper to indicate the utility of the rules perspective. For the purposes of this analysis, human communication is viewed as the successful transfer of symbolic information from one person to another. Divided into three parts, this paper examines the focus of laws, systems, and rules perspectives to determine similarities and differences; reviews the previous development of the rules perspective and its application to the area of interpersonal communication; and outlines a rules theory of interpersonal communication consistent with the previous discussion. The investigation revealed that self-concept is an organized set of rules which direct human action through a cybernetic feedback system, and the rules paradigm of interpersonal communication is predicted upon the feedback approach. (RB)

Alternative Theoretical Bases for the Study of Human Communication: The Rules Perspective

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Human behavior can be characterized from many vantage points. Three potentially fruitful perspectives for the scientific development of human communication theory are those of laws, systems and rules. While each of these perspectives are potentially capable of illuminating the human communication process, it will be my purpose in this paper to indicate the fruitfulness of the rules perspective. The paper has three parts. First, we will briefly examine the focus of each of our three perspectives in order to indicate their potential similarities and differences. Second, we will review the previous development of the rules perspective and its application to the area of interpersonal communication. Finally, we will outline a rules theory of interpersonal communication which follows from our previous analysis.

Prior to entering into the main body of our analysis we are in need of a working definition of human communication theory. For the purposes of this analysis human communication will be viewed as the successful transfer of symbolic information from one person to another.[1] The term theory will refer to a set of propositions which yield warranted expectations about observable phenomena.[2] The warrant for such expectations is to be evaluated in terms of the theories power for explanation, prediction and control.

Similarities and Differences in Focus of the Three Perspectives

Any attempt to comprehensively survey the laws, systems and rules perspective in a single paper is doomed to failure from the outset. Time and space dictate a more modest goal. While it is not possible to be comprehensive in our survey, we will attempt to indicate the diversity and commonalities of points of view in each perspective and the similarities and differences in focus between the three perspectives.

Laws Perspective

Staunch advocates of the laws perspective in the behavioral sciences have been diminishing in numbers over the past ten years. One reason for this decline in support has been the failure of social scientists to locate regularities which have the same degree of generality, necessity and strong empirical support as the lawful regularities discovered in the natural sciences. The failure to locate such regularities has led many behavioral scientists to question the applicability of the laws perspective to human behavior. Methodological

monism has given way to methodological pluralism.[3]

Few philosophers, theorists or methodologists of science have examined actual scientific laws in order to determine what characteristics, if any they share. One exception to this generalization is Peter Achinstein's work Laws and Explanation.[4] The author begins by warning us that "one ambiquity in the use of the term law should be noted at the outset. The term is used to refer both to a proposition and to a fact which that proposition describes".[5] This confusion is further complicated by three separate conceptions of the relationship between a proposition and the fact which a proposition describes.

First, we have the logical positivist position. According to this view, laws enunciate the uniform concomitante of phenomena. The prototype instance of which is either a universal implication (all A are B) or a problematic correlation. The phenomena connected by a law should be logically independent. This suggests that the truth-value of a law is not a matter of logical necessity, but contigent upon the testimony of experience. Since a law's claim to truth transcends the experience of any given instance, laws are in principle never completely verified.[6]

Second, we have the conventionalists position. According to this conception, scientific laws are analytic statements and as such are immune to refutation by experience. Agreement with the law is the standard whereby individual cases are classified as falling or not falling unfer the generic phenomena connected by the law. All A are B, so if a thing purported to be an A is found not to be B, then it is not really an A after all. Such standards for judging things are man made agreements or conventions adapted in the process of concept formation.[7]

Third, we have the natural necessity position. According to this approach, Scientific laws are descriptions of the operation of powerful particulars. The two forms of such operations are by a generative mechanism, and the manifestation of the powers of a fundamental field. The powers of a generative mechanism or a fundamental field operate to produce the empirical basis for hypotheses as to the relationship between coexisting properties or successive events or states. These properties, events or states are naturally necessary when they are demonstrated to be in fact the product of the powers of a generative mechanism or a fundamental field.[8]

The first conception of law gives prominence to the uniform concomitance of nature, the second to the logical properties of a proposition and the third

to the natural necessity of a generative mechanism or a fundamental field. Achinstein is able to cite examples of laws which conform to each of these conceptions of law.[9] Amidst diversity, Achinstein also finds commonality. Any statement which is to qualify as a law must also manifest certain logical and empirical characteristics.

First, a law must specify a logical and empirical relationship which is general. Logical generality is achieved by indicating that (a) all or none of the instances of a category exhibit the regularity and (b) that the categories involved are fundamental in a theory. Empirical generality is achieved by indicating that (a) the variables are not spatially-temporally bound and (b) that the regularity holds for every particular instance of the variable tested.[10]

Second, a law must specify a logical and empirical relationship which is necessary. The necessity we attribute to a law is logically necessary in virtue of that fact (a) that together with a statement about particular items it entails certain types of counterfactuals, (b) that the law expresses an analytic truth. A law is empirically necessary in virtue of that fact (a) that it specifies the direction, shape and strength of a relationship between observable phenomena and (b) that the previous relationship is produced by a powerful particular.[11]

From this perspective the orderly development of human communication theory would proceed by attempting to locate lawful regularities and then employ such regularities as warrants for developing expectations regarding observable phenomena. If invention is viewed as the procedures involved in discovering regularities and judgment the procedures involved in certifying regularities, then it is obvious that a law's perspective allows considerable freedom of invention while employing rather fixed criteria for judgment. Invention may proceed by induction, deduction, analogy, retroduction or any other means. Judgment is governed by a rigorous set of logical and empirical requirements. While research in the behavioral sciences has yet to reveal such regularities, powerful theories that facilitate explanation, prediction and control have been developed in the natural sciences utilizing the laws perspective.

Systems Perspective

Systems is a perspective which has produced more staunch advocates than theoretic empirical research. One Reason for this imbalance is suggested by Dr. Edgan Tashdjin writing in the Behavioral Scientist:

> A system is often defined as a whole composed of parts which influence each other.

> This definition is so all-embracing as to be completely meaningless; everything would be a system. From the cosmos to the solar system down to an atom. If the systems concept is to have meaning, it must be more specific than merely a synonym for relatdness.12

At least two attempts to provide a more specific focus are apparent in the systems literature. First, there are the attempts by general systems analysts who argue that the systems approach provides a speculative philosophy. This group argues that the investigation of systems will reveal regularities of organization which can serve as interdisciplinary laws capable of unifying the diverse areas of human knowledge. This viewpoint was articulated by Ludwig von Bertalanffy when he called for:

> ...a hypothetic deductive system of those principles which follow from the definition of system and by the introduction of more or less special conditions. In this sense, systems theory is a priori and independent of its interpretation in terms of empirical phenomena, but is applicable to all empirical realms concerned with systems. Its position is similar to that, for example of probability theory, which is in itself a formal mathematical doctrine but which can be applied, by way of empirical interpretation of its terms, to different fields, from games to therodynamics, to biological and medical experimentation, to genetics, to life insurance statistics. And so on.13

The search for a general systems theory has proceeded along two complementary paths: (a) the attempt to identify general phenomena which are common to many different disciplines and to model such phenomena and (b) the attempt to model basic units of behavior in different fields and develop a hierarchy among the various systems based on differences in complexity of organization.14

Second, there have been the somewhat less ambitious attempts by systems scientists utilizing logic, mathematics, statistics and computer modeling techniques to investigate the organization and behavior of various systems. According to them a systems theory is composed of a) a set of objects or events, e_i, b) a set of relationships, R_{ij},* such that $e_i R_{ij} e_i$ for all i and j within the system, and c) a calculus or operation for manipulating or drawing implications from the system. The e_i are locial rather than empirical variables. The R_{ij} may be based on logical operators ($\exists x$, $x \Rightarrow y$ for variables x and y), mathematical operators ($y = ax + b$), set operators ($x \subseteq y$) or any other formalized (consistent

and closed) set of relationships. Traditionally one of three sets of assumption is made in regard to the operations of such a system. First, we may assume that it operates as a state determined system (i.e. we can predict almost exactly the next state of the system from the last state of the system). Second, we may assume that it operates as a Markov System (i.e. we can say that if the system is in a certain state now it will go to one of several possible states next, and determine the relative probability of it going to each of these other states). Third, we may assume that it operates as a self organizing system (i.e. we can say that it alters its nature from moment to moment, so that a matrix which is correct for describing its behavior at one moment is inadequate at the next).[15]

This definition of a system is similar to that of a theory in the traditional deductionist paradigm. The difference between a system and a theory rests not in what they are but in how they come to be and the standards by which they are judged. Systems scientists according to Eugene Meehan search for patterns of organization which are "created" for rather than discovered in "phenomena".[16] Because such an approach implies there is no one right way of organizing reality, the usefulness of a specific organizational pattern is dependent upon the purposes of inquiry. Two general purposes of systems inquiry are identified by Meehan.

> What purpose can knowledge of organied experience serve? Here I suggest that we define purpose in terms of two fundamental human needs or requirements. First, the need to anticipate future events so that behavior can be adapted to them; second, the need to be able to control future events so that man can become something more than a servile prisoner of natural forces.[17]

Systems scientists thus form theories by developing formal patterns of systems, structures, functions and processes that can be overlaid on the empirical world. If the pattern fits the phenomena it serves as a guide for anticipating and controlling the events which fall within that pattern. Such an approach assumes no empirical or natural systems. In the systems paradigm, general and necessary propositions are assumed to belong to the logical rather than the empirical world. They may be used to develop warranted expectations about the empirical world only if there is some justification for assuming isomorphism between an empirical situation and the logical system.[18]

Following from these assumptions is a very specific method of inquiry. Systems scientists begin with a focus or purpose of inquiry. Having identified the

purpose of the inquiry they define the boundaries of the system under consideration. Next, they attempt to abstract from the complexity of empirical phenomena those functional interdependencies which preserve the character of the system. They, next posit a formal pattern of relationships and at least one operation on those relationships in order to generate logical entailment. The variables of the formal calculus and its operation form an explanatory system for the phenomena. Modeling systems in this manner has been useful in both the natural and behavioral sciences for the anticipation and control of phenomena.

While general systems analysts and systems scientists may disagree in regard to the ultimate goals of the systems perspective, they are in basic agreement on the methods to be employed and the types of theory to be constructed.

From a systems perspective the orderly development of human communication theory would proceed by modeling the potential and real organizational patterns of communication systems and determining their utility and the empirical conditions which would have to exist for the model to hold. The model is then employed as a warrant for developing expectations about observable phenomena given the purposes of the inquiry. By treating lawful regularities as principles of logically conceived systems and evaluating such regularities in terms of their utility rather than their truth value, the systems perspective provides both a flexible and rigorous method of invention and judgment. Such an approach to theory construction places greater emphasis upon explanation and control than prediction.

The systems and laws perspective have much in common. The focus of the systems perspective on matching abstract models to observables and discovering the operations of systems falls comfortably within the conventional and natural necessity traditions of the laws perspective. But alas, the divergences diverge much more than the coincidences coincide. The systems perspective differs from the laws perspective in that it extends the legitimate range of scientific invention and judgment from existing regularities and their truth value to logically conceivable regularities and their usefulness.

Rules Perspective

Rules like systems is a perspective which has generated more staunch advocates than theoretic empirical research. Two reasons for this imbalance seem probable. First, the concept rule can be used in a variety of ways and only recently have we become aware of the implications of its many meanings. This awareness has led researchers to begin to untangle its many theoretic usages.[19] Second, in many cases the investigation of rules required the modification of

or development of new methods of theory construction.[20] Both of these problems have only recently been resolved in such a manner allowing theoretic research programs to develop. At least three such programs are apparent in the literature.

First, there are efforts by linguists in the Chomskyan tradition to explore the concept of grammatical rules. Linguists have long observed that native speakers on the basis of any arbitrary set of experiences with their language, gained access to the full set of sentences in the language. This observation led Chomsky to hypothesize the presence of a grammar or set of rules from which the language can be derived.[21] Put another way, if the sentences of a language are related in such a way that they are derivable from a set grammatical rules then we can understand how it is possible for a speaker of a language to have access to a repertoire of sentences which go beyond his experiences.

In attempting to research Chomsky's hypothesis and turn it into a theory, linguists were confronted with a problem. The prominent linguistic approach to theory construction focused on how to specify relationships which will demonstrate why the occurence of some event is necessary. The notion of event has meaning only within those universes of discourse in which motion occurs, and motion is possible only within a universe of discourse which has some temporal order.[22] Chomsky's hypothesis involves no claim regarding temporal order. It only makes a claim about the existence of an object (a grammar) and its power. The weak claim of such a theory would be that objects (a set of rules) exist and the stronger claim would outline the structure of such objects. Such a theory raises a second theoretical problem concerning the specification of a relationship which demonstrates the existence of an object and anticipates the set of behaviors it makes possible. Existence and possibility, not motion and necessity, are the focus of inquiry.

Linguists developed a research paradigm for theory construction in just such a circumstance. The method of invention they employed is outlined by Robert Sanders and Larry Martin:

> ...the obvious test of a linguistic grammar is whether that grammar derives all and only sentences of the language. This is not an empirical question, since an empirically obtained collection of utterances will be finite (where L is an unbounded set), and may contain sentences which are not in L (given the possibility of linguistic behaviors which are incoherent). Now consider the general procedure for construc-

> ting a linguistic grammar. Native speakers specify a finite set of sentences which they recognize as sentences of L, and a set of Rules is constructed which derives that set of sentences. But the output of a set of Rules is unbounded, so that sentences will be derived which were not in the finite sample from which the set of Rules was inferred. If some of the sentences in that derived sample are judged not to be in L, the Rules will be amended in such a way that those sentences are not derived.23

The existence and power of such a grammar is then assessed in terms of two criteria. Sanders and Martin explain:

> ...one, amendents to the set of Rules are subjected to the criterion of independent motivation. Once a Rule has been amended on the basis of a speaker's judgments, one test of the validity other than the one which prompted the amendment is resolved by it as well. But a second, and much stronger, verification procedure arises from the fact that a set of Rules is a deductive mechanism. As such, it must be internally consistent: where a Rule may be amended solely on the strength of a speaker's judgments, the effect of any such amendment on the full set of Rules must be considered. This means that the criterion of internal consistency is a check on native speakers' judgments.24

Such a method of invention and judgment combines the basic theoretic strategies of the conventional, natural necessity and system modeling paradigm. The explanation and prediction of existence and possibility is achieved through a rigorous fusion of observation and deductive entailment. The productiveness of such an approach for locating rules and establishing their existence and structure is well documented in the linguistic literature.

Second, there are the efforts by analytic philosophers in the action tradition to argue for the practical syllogism as a model for theory construction in history and the social sciences. Following in the tradition of Aristotle and Kant such philosophers maintain that human actions are prompted by intentions. The force of intentions as an explanatory model lies in the fact that agents are disposed to follow rule-governed patterns of behavior and such patterns provide the regularities linking the intention to the behavior. Such an explanation of human behavior is viewed as teleological and modeled by the practical syllogism. Practical reasoning takes the following form: a) A intends to bring about P, b) A considers that he cannot bring about P unless he does B, and C) therefore, A sets

himself to do B. According to George Henrick von Wright:

> ...the practical syllogism provides the science of man something long missing from their methodology: an explanation model in its own right which is a definite alternative to the subsumption-theoretic covering law model.25

Philosophers of action defend this claim by identifying the powers of the generative mechanism called man, relating those powers to patterns of observable behavior, and then arguing that such a relationship is neither logically nor causally determined. Such patterns are said to have practical force.

Human beings according to action theorists have the power to act--they can do things. Following in a Kantian tradition they argue that human perception and thought must be viewed as activities men perform--things they do. Sensory stimuli are organized into spatial patterns in accordance with a rule. Neither experience nor thought can be understood as something that happens to us but only as activities we undertake in accordance with rules.[26] Following in an Aristotelian tradition action theorists argue that another thing that man can do is intentionally interfere with the course of nature by making a cause happen or by preventing a cause from happening in order to bring about certain consequences.[27] The exercise of such powers are teleological. Teleological behaviors have two parts. The first consists of an inner part or intention rooted in previous experience. The second consists of an outer part which has two aspects: a muscular activity (i.e. the interfering with a cause in nature) and the consequences which ensue from that interference. The unity of these two outer aspects in a teleological explanation consists in their subsumption under a common intention. The mere citation of causal connectedness is insufficient to explain, predict and control the regularity.[28]

The schema of a practical syllogism is that of an inverted teleological explanation. The beginning point in such an explanation is that an actor sets himself to take some action. When we ask "why", the answer is "in order to bring about B". It is assumed that the actor considered the behavior we are trying to explain as necessary to bring about B. Even if the actor was mistaken in thinking that his action would bring about the desired consequences it does not invalidate the explanation of why he set himself to do B. Action theorists argue that the link between premises and conclusion in practical inference is neither logically entailed nor causally determined.[29] Logical entailment is rejected on the grounds that the premises of a practical syllogism do not with logical

necessity entail the existence of a conclusion to match them. It is only when an action is already completed and a practical argument is constructed to explain or justify it that we have a logically conclusive argument. The logical necessity of the practical inference scheme is a necessity conceived ex post actu. Causal determining is rejected on the grounds that one cannot verify the premises of a practical syllogism independent of its conclusion. It is therefore necessary to separate explanations of causation in nature and explanations of causation in the realm of individual and collective action.

Following from these assumptions is a very specific method of inquiry. Invention and judgment in this system of inquiry functions at two levels of analysis simultaneously. First, a teleological explanation requires a prior act of intentionalistic understanding of some behavioral act. This understanding can only be achieved by locating the actor's intentions and perceived courses of action. The basic method for achieving such an understanding is the same as the method employed by the grammatical linguist. When such an understanding is achieved the behavioral data becomes a social fact amenable to explanation. Second, a researcher in the action tradition may investigate the interaction of social forces (intentions) and natural forces (causes) in order to obtain knowledge of the best fit between the two. Such a method of inquiry combines the basic theoretic strategies of the laws and systems perspective facilitating explanation of human action and expansion of man's control over the forces of nature. Explanation and control are achieved through a rigorous fusion of observation and practical inference. The productiveness of such an approach for locating rules, identifying their existence, structure, and evaluating their utility is well documented in the historical and social scientific literature.

Third, there have been efforts by cognitive philosophers, psychologists and neurophysiologists in the evolutionary tradition to establish a hierarchy of cognitive functions by explicating the various ways in which rules have been employed to explain human behavior. Following in the tradition of Toulmin, Vygotsky and Luria such theorists maintain, that it is an error to commit ourselves to a sharp dichotomy between "person" and "things", "actions" and "causes", or "rules" and "laws". In each case the actual empirical subject matter has an inner richness and complexity which refutes such over-simplifications. They argue further, that a careful study of the variety of ways in which "rules" are commonly used to explain human behavior reveals a continuum of progressively more complex cognitive functions. Finally, they argue that this new account of rules suggests

a method of theory construction which includes both causal and actional conceptions of human behavior.[30]

Theorists in the evolutionary tradition begin their defense of these claims by explicating at least seven different classes of rule behavior ranging from the purely causal to the strictly rational:

(1) Behavior which happens "as a rule". After a fever subsides the influenza patient as a rule begins to perspire freely and demands fluids. Regularity in this case depends upon a causal relationship.

(2) Regular Behavior. A good Christian regularly goes to church. Regularity in this case is descriptive of a habit.

(3) Rule Governed Behavior. Children's games and culturally determined rituals are examples. Regularity in this case is internally guided by a very loose set of rules which allow individual variations.

(4) Rule Conforming Behavior. Language is the best example. Regularity in this case is highly normative and the behavior is either correct or incorrect.

(5) Rule Following Behavior. One example would be reasoning or calculating a means to an end. Regularity in this case is determined by functional efficiency.

(6) Rule Applying Behavior. The application of the rules of scientific inquiry in solving a problem is an example. Regularity in this case follows from the application of systematic sets of rules to a problem.

(7) Rule-Reflective Behavior. Doing a mathematical transformation or evaluating different methods of inquiry are examples. Regularity in this case follows from the critical evaluation of rule applying behavior.[31]

This stratification of rules behavior has several very significant implications. It is important to note that such examples can be ordered on a continuum which reveals progressively greater orders of complexity. While researchers for the purposes of inquiry might want to explore one of the classes of rule behavior, any complete theory of human behavior must be rich enough to include all stages without blurring the differences between each. The internal structure of such a scientific theory will take the form of a stratified sequence of secondary necessary conditions which presuppose that the addition of primary necessary conditions will move the theory up a level of complexity.[32] Theories can thus be developed at each stage of complexity. Explanation, prediction and control at any one stage will not be in competition with those developed at another stage because they presuppose a different level of complexity.[33] Experience with rules

behaviors at one stage becomes a prerequisite for learning rule patterns of behavior at subsequent stages. Traces of rule patterns learned at one stage survive in recognizable form at more advanced stages. It therefore becomes necessary to identify the thresholds of behavior which must be reached before one is ready to move to the next stage, distinguish between alternative learning pathways and understand the consequences which flow from each pathway. Each of these pathways can then be viewed as alternative processes of adaptation which are more or less successful. Thus, excluding the first stage, this taxonomy of rule relevant behavior turns quite rapidly into a taxonomy of more or less complex cognitive functions and behavioral adaptation.[34]

A very specific method of inquiry follows from this discussion. Evolutionary theorists begin by analyzing a given unit of behavior in order to discover how such behaviors are acquired. This will lead in turn to the invention of a taxonomy of functions manifesting increasing degrees of complexity. Theories constructed under such a system would begin with the description of a powerful mechanism which manifested increasing degrees of complex behaviors. As each new level occurs theories of the relations involved in that level would be constructed. Verification within such theories would employ the basic procedures of the laws, systems, and rules perspectives. The productiveness of such an approach for locating rules, identifying their structure and evaluating their utility is well documented in the language acquisition literature.

While limitations of time and space have prevented a comprehensive review of all the positions within the rules perspective, our brief summary has revealed some important commonalities. First, rules reflect the complex cognitive and behavioral function of human beings. Whether one take a Chomskyan action or evolutionary approach, rule behaviors are viewed as capacities of a powerful mechanism--namely man. Regularities are thus studied by explicating the specific powers of man which give rise to various types of rule regularities. Second, rules generate regularities which are different in kind from causal regularities. Whether these differences are viewed as opposing or supplimenting causal forces depends on the respective approach one takes. While diversity exists concerning this issue, each approach clearly considers rule regularities as not explicable in solely causal terms and requiring additional theoretic distinctions.

From a rules perspective the orderly development of human communication theory would proceed by explicating the powerful mechanisms which give rise to rule behaviors and determining the logical and empirical conditions under which

each type of rule regularity might be expected. Additional theories would then be developed at each level of rule behavior to account for the regularities involved. These theories would then be employed as warrants for developing expectations about observable behavior.

The rules perspective has much in common with the laws and systems perspective. The focus of the rules perspective on modeling a powerful mechanism and indicating the various levels of regularity that follow from it fits comfortably within the mathematical modeling, conventional, natural necessity and logical positivists procedures for developing theory. But one again the differences differ more radically than the coincidences coincide. The rules perspective differs from the laws and systems perspectives in that it extends the legitimate range of scientific invention from causal to practical regularities and focuses attention on the manner in which such regularities manifest increasing levels of complexity. The rules perspective also differs from the laws and systems perspectives because of differences in judgment procedures employed. Regularities observed in terms of constant conjunction and utility gain a new dimension by being judged in terms of their practical force and success in leading to new levels of complexity.

Our brief review of the laws, systems and rules perspectives has revealed similiarities and differences both within and between perspectives which provide the social scientists with a repertoire of theoretical moves for exploring human communication and constructing viable theories. We have next to put these moves to use.

A Review of the Previous Development of the Rules Perspective and Its Application to Interpersonal Communication

Our purpose here is to lay the foundation for developing a rules theory of interpersonal communication. In order to accomplish this task it is necessary to review the previous development of the rules approach from which the theory flows. This discussion will be limited to the work of Cushman and his associates on communication rules. This limitation is not meant to cast doubt on alternative approaches, rather expedience dictates such a strategy. Our survey will have three parts. We will examine the nature of one generative mechanism which gives regularity to the communication process. Next, we will explore the sub-functions of such a mechanism in order to set interpersonal communication apart from other forms of communication. Finally, we will explore the nature,

function and scope of the mechanism which generates interpersonal communication regularities. This survey will place us in a position to formulate a theory which will govern the interpersonal communication process.

Elsewhere we have argued that human communication is most fruitfully viewed as a class of human activity whose significance is largely dependent upon the existence of consensually shared rules.[35] Four propositions undergrid that analysis.

(1) That conjoint, combined and associated action is characteristic of human behavior.

(2) That the transfer of symbolic information facilites conjoint, combined and associated behavior.

(3) That the transfer of symbolic information requires the interaction of sources, messages and receivers guided and governed by communication rules.

(4) That communication rules form general and specific patterns which provide the ground for a fruitful explanation and description of particular communication transaction.

Several implications were drawn from this analysis. Communication is viewed as the transfer of symbolic information. The function of human communication is the regulation of consensus in order to coordinate human behavior. The structure of human communication is the code and network rules involved in regulating consensus. The process of human communication is the adaptation of the rules involved in regulating consensus to the task at hand. The basic unit of analysis in such a conceptualization of the communication process is a standardized usage. We argued that:

> ...there exists systems of rule governed symbol meaning associations which are relatively persistent because the participants engaged in some task have found that system particularly useful for coordinating their activities in regard to that task. We shall term such a system of appropriate choices among alternative interpersonal meanings a standardized usage.[36]

The decision to take a standardized usage as our basic unit of analysis requires that we determine: (1) the function, purpose, or goal which various levels of communication serve, and (2) the systems of standardized content and procedural rules which develop to coordinate behavior in regard to those goals.

In a second article we attempted to distinguish the various levels of communication systems by determining the recurrent tasks within a given culture, for which coordination is required.[37] We discovered four such levels. Mass

Communication serves to coordinate human activity in regard to Social and Culture Institutions. The standardized usage involved is employed by all persons participating in society. The content and procedural rules employed provide information about social institutions and prescribe the communication patterns for social roles. Organizational communication has as its principle function the coordination of human activity in regard to production. The standardized usage is employed by all persons who contribute to the production of an organization. The content and procedural rules employed provide information about objects of production and prescribe the communication patterns for organizational roles. Group Communication coordinates human activities with common interests. The standardized usage is employed by all persons who voluntarily hold that interest. The content and procedural rules employed provide information about the interest involved and prescribe the communication patterns for group roles. Interpersonal Communication has as its principle goal the coordination of human activity in regard to the development, presentation, and validation of individual self-concepts. If an individual's self-concept is viewed as the information he has regarding his relationship to objects or others, then the development, presentation and validation of an individual's self-concept will take the form of descriptions, assertions and denials regarding an individual's relationship to objects or others. The standardized usage employed is person specific. The content and procedural rules employed provide information regarding an individual's relationship to objects or persons and prescribe the communication patterns appropriate for interpersonal roles.[38]

This stratification of communication by systems levels has several important implications. Each systems level has its own mechanism for generating communication regularities. Such regularities are termed a standardized usage and consist of the synamic networks of partial and complete consensus which organize and direct behavior. A standardized usage is learned through a process of role-taking. If role-taking is the central mechanism for the learning of content and procedural rules at each systems level, then it is possible to measure an individual's acquisition of a standardized usage by either asking the individual what he is expected to do or by reports of individuals who observe his use of the standardized usage. Such a measure along with knowledge of the generative mechanism should allow us to develop a theory of communication for that level. A theory at one systems level will not be in competition with a theory at another level because they will presuppose different generative mechanisms, while researchers may wish

to develop a theory at one or more of the systems levels, any complete theory of communication must be capable of accounting for all the systems levels without blurring the difference between each level.

"Human Action, Self-Concept and Cybernetics" became the focus of a third article aimed at explicating the central features of the mechanism which gave regularity to our interpersonal communication processes.[39] We began by noting that to ascribe action to a person implies that: (1) a certain state of affairs came into existence, (2) the individual intended this state of affairs, and (3) that his actions were in part instrumental in bringing it into existence. Next, we argued that any explanation of human action will require an understanding of the actor's view of his relationship to those objects he deems relevant to his actions. We suggested that the self-concept and the processes it involves would provide knowledge concerning the objects the actor considers relevant to his actions. The self-concept is viewed as an organized set of rules which defines the relationship of objects to the individual and governs and directs his action. These rules prescribe that in circumstance x, some act y is appropriate. We argued further that there are two basic ways that awareness of such relationships can be obtained: (1) inductively through the observation or testimony of others and (2) deductively from previously-existing rules. Finally, we argued that the self-concept served as the coordinator and initator of a positive and negative feedback systems that governs goal-seeking and systemic change. Positive and negative feedback are essential to an understanding of how an actor can construct, organize and reconstruct his plans for action in the vary process of acting.

Several important implications follow from this analysis. The self-concept is viewed as a repository of rules indicating what a given individual wants and how he thinks he can satisfy his wants. Practical reasoning engaged in by the actor gives practical force to his behavior. Since this reasoning governs and guides the individual's actions we might attempt to measure it's logical structure by asking the individual why he chose a particular behavior or by observing reported instances of his behavior. Some of the rules which make up the self-concept will be backed by considerable experience and as such will be relatively stable while others will be backed by limited experience and thus take on a more tenative form.

In this brief review, we have examined the human communication process in order to determine what mechanism gave it regularity. Our answer is communication will function to regulate consensus in regard to the structure of code and

network rules whenever individuals are interdependent in regard to some task. Second, we have examined the recurrent tasks within a given culture for which coordination is required in order to locate the mechanisms which generate communication regularities. Our analysis revealed that mass communication is regulated by social and cultural institutions, organizational communication is regulated by production, group communication is regulated by common interests and interpersonal communication is regulated by the development, presentation and validation of individual self-concepts. Finally, we examined the mechanism which gave regularity to the interpersonal communication process in order to determine its nature function and scope. Our investigation revealed that the self-concept is an organized set of rules which direct human action through a cybernetic feedback system. We are now in a position to utilize the proceeding analysis to formulate a theory of interpersonal communication.

An Outline of a Theory of Interpersonal Communication

Our task is to develop a rules theory of interpersonal communication. The theory will be developed in two stages. First, we will develop a roles paradigm for locating the exact structure of an individual's self-concept. Second, we will then employ the self-concept as a generative mechanism for outlining a theory of message contents, interpersonal relationships, and communication styles.

Role-taking according to George Herbert Mead is the "essence of intelligence" and the central mechanism in the development of mind, self and society.[40] Role is conceptually defined as a socially prescribed way of behaving in particular situations for any person occupying a given position. A role represents what a person is suppose to do in a given situation by virtue of the position he holds. Role-taking is the process whereby an individual imaginatively constructs the attitudes and expectations others have for him when he assumes a given role; this allows him to predict others behaviors towards him when he occupies the role. We will distinguish four levels of role-taking.[41] Basic role-taking is the process whereby an individual imaginatively constructs the attitude and expectations of others towards his position and is consequently able to anticipate and respond to the roles of others. Reflective role-taking is the evaluation of various role requirements in regard to an individual's personal likes and dislikes. Appropriative role-taking entails an individual's evaluation of some aspect of a role positively and makes it a permanent part of his personality or self-concept. For

example, an individual maybe a debator and find that he likes one aspect of the role, namely, the aggressive testing of arguments. He may then make that aspect of the role a permanent part of his personality. This means that even when he leaves the role he will take the opportunity to exercise that aspect of his personaltiy whenever the occasion arises. Appropriative characteristics are person dependent and not role dependent. They are that set of characteristics one manifests across roles. Synesic role-taking occurs when a person can separate some other individual from his roles and responds to him as a self.

The stratification of role-taking by awareness levels has several important implications. Basic, reflective, appropriative and synesic role-taking represent progressively greater orders of communication awareness. Communication awareness enables individuals to comprehend the standardized usage characteristic of other roles. Experience in cuing, listening, and negotiating consensus on meanings at one level of role-taking paves the way for the development of communication learning at subsequent levels. Basic and reflective role-taking are processes one employs to learn and evaluate previously established roles and their standardized usages. These two levels of role-taking presuppose the existence of mechanisms other than the individual to generate such roles. Basic and reflective role-taking are thus restricted to the mass, organizational and group levels of communication systems. Appropriative and synesic role-taking are processes one employs to develop, present and validate individual roles and their standardized usage. These two levels of role-taking presuppose the existence of a self-concept as the mechanism generating roles. Appropriate and synesic role-taking are thus restricted to the interpersonal levels of communication systems.

It is our belief that the interpersonal levels of role-taking can be valid and reliably measured by the Twenty Questions Statement Test.[42] This test can be made out either by an individual actor or any group of people who observe an individual's actions. The Twenty Questions Statement Test asks one to respond to the statement "I am____ or x is____" with twenty descriptive terms. If one were asked to fill this questionaire out on himself or another in a variety of specified roles (i.e. Father, teacher, friend, etc.), then those descriptive terms which manifest themselves again and again across role positions will define the focal individual's appropriative and synesic qualities--his self-concept. Researchers can then employ the methods of invention and judgment developed by the linguists in the rules tradition to locate a set of appropriative and synesic qualities which generate all and only those role characteristics manifested by a

given individual as self.[43] An individual's self-concept is thus operationalized as that set of appropriative and synesic qualities which an individual manifests across roles and which others use to identify the individual as a self.

Once we locate a given set of appropriative and synesic qualities we can then treat those qualities as the generative mechanism for explaining, predicting and controlling the individual's interpersonal communication patterns. This can be accomplished by developing categories of message contents, interpersonal relationships and communication styles which are tautological with the set of appropriative and synesic qualities. Our distinctions will be the same as the appropriative and synesic qualities of role-taking, but our subject matter will be communication behaviors. Allow me to illustrate our move. Let a set of valid and reliable appropriative and synesic characteristics for Don Cushman be:

1. Don Cushman is aggressive.
2. Don Cushman is organized.
3. Don Cushman is arrogant.
4. Don Cushman is interesting.
5. Don Cushman is thoughtful.
6. Don Cushman is helpful.

Let the first three qualities be appropriative and the last three synesic. Now we can array the complete paradigm for classifying interpersonal communication and systematically evaluate it.

	Role Qualities	Content	Relationships	Styles	Risk	Disc.
1.	Appropriative	Means End	Dependent	Manipulative	L	H
2.	Synesic	Other Oriented	Interdependent	Open	H	H

Turning to the message levels, we are suggesting that a content analysis of Don Cushman's interpersonal messages will reflect two primary classes of statements, means-ends statements and other-oriented statements. Means ends statements will take the form of assertions of aggressiveness, organization, and arrogance thus reflecting Don Cushman's appropriative qualities. Other oriented statements will take the form of assertions that Don Cushman can see things from the other's point of view and will manifest his synesic qualities of being interesting, thoughtful and helpful. A content analysis of Don Cushman's messages should reveal this pattern of statements as the principle configuation in his interpersonal communication.

Turning to interpersonal relationships, we are suggesting that an interaction analysis of Don Cushman's communication will reveal that he manifests dependent and interdependent relationships of a particular form. Dependent relationships will be formed with people who will allow Don Cushman to be aggressive, organized,

and arrogant. Interdependent relationships will be formed with people who allow Cushman to be interesting, thoughtful, and helpful. Any given relationships must reflect either or both sets of qualities.

Turning to communication styles, we are suggesting that Don Cushman's habitual interaction styles will manifest these same qualities. We shall operationally define style in terms of risk and disclosure. Risk refers to how a communicator limits others' responses to his messages. A low risk statement is exemplified by "its a nice day, isn't it?". The communicator minimizes personal risk by selecting impersonal topics and structuring his statements in a manner that elicit responses acceptable to him. A high risk statement is exemplified by "what do you think?". Such a statement fails to prescribe acceptable responses and hence increases the risk from unknown responses. Disclosure is employed in the traditional sense of the term. Low disclosure will be that communication interchange in which a minimal amount of information concerning the communicators' self-concept is exchanged. High disclosure occurs when information is exchanged which reveals the structure of the communicators' self-concept. A risk and disclosure analysis of Don Cushman's habitual interaction styles will reflect that he uses both the manipulative and open styles to manifest his self concept. A manipulative communication style is characterized by high disclosure and low risk messages and will allow Cushman to manipulate others in such a manner as to manifest his aggressivenss, organization, and arrogance. An open style is characterized by high risk and high disclosure messages and will allow Cushman to be open to others and to manifest his interest in, thoughtfulness of, and helpfulness to others.

If our analysis is correct and the self-concept can be viewed as the generative mechanism which gives regularity to the interpersonal communication processes we should have four measures of that mechanisms functioning and the communication regularities which it generates. If our analysis is incorrect we must begin anew the search for a generative mechanism for interpersonal communication. We must await the testimony of further research in order to provide a final evaluation of our rules theory of interpersonal communication. If our analysis is validated then we will have a theory of interpersonal communication which is no stronger or weaker than the rules perspective itself.

FOOTNOTES

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