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IMPLICATIONS FOR CURRICULUM BUILDING AND
TEACHING PRACTICES IN ENGLISH.

The Louisiana State University and
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Ph.D., 1975
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A HOLISTIC APPROACH TO LANGUAGE THEORY:
ITS IMPLICATIONS FOR CURRICULUM BUILDING
AND TEACHING PRACTICES IN ENGLISH

A Dissertation

Submitted to the Graduate Faculty of the
Louisiana State University and
Agricultural and Mechanical College
in partial fulfillment of the
requirements for the degree of
Doctor of Philosophy
in
The Department of Education

by
Alberto E. Lazarus
B.A., University of Northern Iowa, 1969
M.A., University of Northern Iowa, 1970
December, 1975
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ABSTRACT

The problem was to conceive of language as a means of looking for insights into the nature and workings of the human mind to identify the components necessary for effective communication. A model of the language event provided such components, and described the event as a systematic and whole process.

Data was gathered from positions on the nature of language taken by representative philosophers, linguists, anthropologists, psycholinguists, psychologists, and educators, to examine the processes whereby cognitive and linguistic proficiency develop, and to account for the operational principles which give form to such processes in social contexts.

The procedure was to synthesize the interdisciplinary positions, and to clarify their basic assumptions. The model of the language event was derived from the systematic abstractions.

The naturalistic transactional approach of the model accounted for the communicative act as a social process in which some of the activities take place within, and others take place between, the individuals involved. Participants need to use symbols, to become objects to themselves, and to take the role of the other, to be fully developed selves with the adequate behavioral characteristics and response capacities to communicate. The model stressed the importance of the intuitive and metaphoric intrapersonal component as the process whereby the human intellect emerges and develops through communication.
The interpersonal component was identified as the process whereby speaker and listener assume appropriate roles in society. The model also detailed thirteen specific capacities which participants in a language event must have developed to some acceptable degree before the language event can occur. The importance of metaphorizing in communication in order to express heretofore unexpressed novel ideas was stressed. Moreover, phonation, explication, and modification were identified as the patterns marking the transition from intrapersonal to interpersonal communication. Understanding between participants was seen to occur when, first, the speaker progressed from an awareness of the role of the other, to an awareness of his own meanings, discourse and role. Second, the receiver became conscious of his role in terms of the other, then of the speaker's discourse with its underlying metaphors, and of the role taken by the other. These generalized other selves measured message success against original intent according to their access to available and suitable linguistic forms, while cognizant of rationality, logic, and style.

The model yielded considerations and corresponding implications for a curriculum theory of English. Such a curriculum would need to make provisions for the implications discussed. Some of these are:

1. That symbol-making is the unique human attribute pervading those networks comprising man's cognitive field in its psychomotor, affective, and cognitive aspects. These link man to others through culture.
2. That language learning involves the covert and overt trials which develop and organize purposive acts to make the transition from intrapersonal and interpersonal communication.

3. That generating language proceeds continuously through cognitive models developed by social and intellectual interactions from egocentric speech to decentered, communicative speech.

4. That language performance involves skillful language use developed through concrescences of cognitive, affective, and psychomotor reorganizations which extend man's activities beyond bodily confines.

5. That language brings minds together as the result of language events that elucidate meaning. Mind apprehends mind through the perception of interconnectedness among persons, the physical world, and symbolic environments.

6. That extensions of man are the continuous development through language of man's cognitive field. The phenomenological field is the representation to oneself of a series of social roles manifested in symbolic, manipulative, cognitive, and affective activities.
Chapter 1

INTRODUCTION

Thomas Kuhn (1962:52-53) has noted that all scientific inquiry begins with the discovery of an anomaly in our conception of a particular aspect of our universe, that is, with the recognition that nature has somehow violated the paradigm-induced expectations that govern natural science. It then continues with a more or less extended exploration of the area of anomaly, and it closes only when the paradigm theory has been adjusted so that the anomalous has become the expected.

Since the paradigms which govern one's expectations cannot be adjusted simply by adding new sorts of facts in order for the anomalous to become the expected result, one's entire conception of that aspect of nature must be changed to include and account for the apparent discrepancy. A subject matter teacher who would not ordinarily seek out alternative conceptions might be led to re-examine his aims in the light of means used for achieving them, were he suddenly to become aware of an anomalous situation.

The anomalies which have given impetus to this study are the ones that have aroused discontent among language teachers and the developers of curricula for language teaching. They fall into four classes.

The first is growing awareness that current teaching practices in the language arts are falling somewhat short of their intended aims. For example, some research seems to indicate that the formal study of grammar of any kind has little or no effect on the ability of students to write, read, or speak well. Likewise, assigning the standard
period-long classroom theme is a rather barren way of teaching students to write thoughtful, well-organized compositions (Braddock et al., 1963).

The second anomaly is the awareness that English is not a single, unified discipline of knowledge, notwithstanding feelings that perhaps it should be. Too many English curricula resemble depositories for varied skills not claimed by other disciplines but regarded as necessary to a student's education. The teaching of skills like the writing of correspondence and proper telephone etiquette, together with courses designed to teach about structural linguistics and literary analysis can be seen to incorporate piecemeal knowledge and skills of greatly differing orders, each having distinct and peculiar characteristics, purposes, and underlying views of man and nature. Thus, students receive no awareness that English is a coherent and interrelated area of expertise from which knowledge about English may be induced. As the student goes about the fragmented tasks of writing teacher-assigned themes, analyzing sentence components, memorizing vocabulary and spelling lists, and reading stories for plot sequence, he is instead led away from a sense that English is essentially language use in all its many-faceted forms governed by the many purposes that impel human communication. On the other hand, the Nebraska English Curriculum developed under Project English of the United States Department of Education (1964) is an example of an approach which attempts to integrate language, rhetoric and literature as the three fundamental areas from
which principles are derived for organizing a functional and sequential approach to English from kindergarten to twelfth grade. It seems to lead toward a unified sense of what English is about. It does lack, however, an explicit and coherent a priori theory which would clarify and distinguish the problems of leading students to know about language, rhetoric, and literature, and would at the same time lead students toward competence in writing, thinking, listening and reading.

Moffett discusses this lack when he explores the functional approach to the teaching of English. Moffett (1966:17-28) states:

It is not hard to find a structure in English. All the particles—word, sentence, paragraph, compositional whole, literary form—offer us structures, a regress of increasingly larger contexts. But what are they substructures of? For the regress is only theoretically infinite; our conception is always finite. Some ultimate context or super-structure is exactly what English as a school subject has always lacked.

The third area of anomaly has to do with the constant debate between advocates of learner-centered and context-centered curricula. Those of the first group tend towards the "needs" of the student as prime factors determining the development of courses of study emphasizing, for example, personal relevance of the material studied and language learning as a skill to be mastered for self-fulfillment or for social acceptance and vocational success. Advocates of the second tend to stress the transcendence of formal knowledge over immediate purposes and tradition, are concerned with the development of the intellect, and support the organization of education into subject matter divisions. For example, Broudy, Smith and Burnett (1964) do not look on the secondary school curriculum as means for job training,
that is, for the applicative use of knowledge, but rather as the means to general education which exemplifies the interpretive use of knowledge primarily and its applicative use only indirectly. In this often acrimonious debate, it may be well to note Bruner's proposal (1960:52) to ground curricula in "the most fundamental understanding that can be achieved of the underlying principles that give structure to that subject." The proposal appears to be content-centered but can be interpreted as an attempt at rapprochement between the two diverging schools of thought. Emphasizing that "structure" is more relations than it is substantive things, concepts, or principles as Moffett has indicated, we may arrive at a structural, learner-centered curriculum.

The fourth anomaly deals with a philosophical dichotomy, a basic-elements versus organic-unity (parts versus wholes) approach to language theory. At issue here are two divergent analytical procedures which have been applied to language: taxonomic analysis of utterances into substantive elements or messages, and functional analysis of discourse in the context of interpersonal communication. The earlier approaches to the description of grammar: historical, normative, lexical, descriptive and structural, tend toward the former, while the more recent syntactic, transformational and tagmemic approaches seem to be moving in the direction of the latter. Likewise, the study of the problem of meaning, which is integral to the problem of language, seems to be split into two views: one which treats meaning reductively and objectively, and another which treats meaning holistically and subjectively. Some philosophers of language like Austin (1962)
and Wittgenstein (1953) have suggested that a statement can be said to have meaning at only one level; the act performed in the saying is the meaning of that statement. At the other extreme, philosophers like Cassirer (1953) and Dewey (1933) have asserted that only persons mean; words in themselves do not. Since words are symbolic abstractions of experience, however, words acquire meaning only in relation to that personal experience. What makes meaning social and not entirely subjective is the fact that persons living in like linguistic communities and cultures are presumed to have similar experiences, hence to apprehend similar meanings. The problem of communication here is that of interpreting the knowledge, experience, and judgment of the person addressed that one's intent or meaning is sufficiently explicated to reduce ambiguity and increase the listener's comprehension.

THE PROBLEM

This study focuses on language as a way of looking for insights into the nature and workings of the human mind to thereby identify the various components involved in effective communication. Ultimately, the study develops a conceptual structure by which language events may be described as systematic processes; such a schema provides the basis for the development of a theory of language with implications for the English curriculum and teaching practices.

Assuming also that the object of inquiry is the production of knowledge, this study develops a conceptual structure by which language events are described as systematic processes, as parts of an irreducible
organic whole. Ultimately, such a schema provided the basis for the
development of a theory of language and its teaching. More specifically
then, the study attempts to develop a schema which would generate a
way of conceiving of language which:

1. takes into account the meaning of whole utterances rather
   than starting with its most elementary particles;
2. allows the description of language events in terms of
   what a speaker and listener do;
3. makes explicit the functional relations between the elements
   in the stream of speech;
4. does not take an unduly restricted view of human capacities;
5. suggests how knowledge of the language process may be
   personally relevant and meaningful.

SOURCES OF DATA

The materials and data used in this study were secured from
that extremely broad ground—the nature of language—which is of
perennial concern to philosophers, grammarians, anthropologists,
psychologists, and educators. Generally, two orders of language
process constituents were examined: (1) the process by which cognitive
and linguistic proficiency is developed, and (2) the regular structure
and operational principles through which such processes appear to be
given form in a social context. These conceptions were derived in large
part from important hypotheses including philosophical and psychological
ideas of human nature as viewed by the various disciplines. Certain
kinds of knowledge assert the primacy of innate high-order human
capacities such as those of language, thought, symbolization, and abstraction. How these capacities emerge from low-order biological and psychological abilities is dealt with in the philosophies of Dewey, Mead and Cassirer and in the developmental and cognitive psychologies of Piaget, Snygg and Combs, Bruner and Vygotsky. These contributed the philosophical and psychological framework for a holistic conception of man as a symbolizing, language-using, learning self.

More specifically, relevant works dealing with the following basic conceptions were examined:

a) Dewey's ideas on the uses of reflective thinking and speaking--the soliloquy or inner dialogue.

b) Mead's notions of socialization and role-taking.

c) Cassirer's theory of symbolic and discursive forms.

d) Piaget's developmental epistemology.

e) Snygg and Comb's organismic conception of individual behavior.

f) Bruner's cognitive psychology in which learning is a heuristic process, and each discovery in the operations and functions of language assists the individual to perfect his competence in dealing with reality in its verbal aspect.

g) Vygotsky's psycholinguistic conceptions of the language production process.

h) Richards' conception of metaphor as the principle of language.

i) Langer's conception of the elucidation of the existential meaning of an individual's awareness of the relations of things in the
world through the metaphoric and discursive modes of speaking and thinking.

j) Polanyi's theory of personal knowledge.

k) Austin's, Alston's and Wittgenstein's work on the inner aspect of language by analyses of the uses of language in everyday speech.

l) Sapir's use of "meaning" to refer to the semantic content of a linguistic proposal which arises in the play of language on thought and vice-versa.

m) Pike's view of language as particles (phonemes and morphemes), as higher order waves (syntax), and as even higher orders as fields of functional relations (semantics and communication).

n) Fagan's and Moffett's postulates which call for a more inclusive theory for an English curriculum, and for higher-order principles of language.

o) Chomsky's generative grammar which offers suggestions from which a curriculum theory of the language teaching process may be derived.

p) Peirce's retroductive method to derive a model in which the relevant elements appear consistent, comprehensive and adequate.

q) Maccia's proposals for adopting the retroductive theory construction with its basic assumption that all inquiry is directed toward knowledge production.
PROCEDURE

The procedure used in solving the central problem was to depart from the main positions outlined in "Sources of Data" in the following process:

1. The main conceptions were SYNTHESIZED.
2. The basic assumptions of the main conceptions were CLARIFIED.
3. An explicit, consistent and adequate schema was DERIVED.
4. Thus, the schema came to consist of SYSTEMATIC ABSTRACTIONS from selected aspects of particular views on the process of linguistic communication, taken, for example, from supporting positions from Cassirer, Vygotsky, Mead, et al.
5. The schema, in accord with the retroductive method and theory-model described by Maccia, was given a common "language" to list the theoretical conceptions developed in the elaboration of the schema.
6. From such conceptions a curriculum theory of the language process was drawn so as to be rigorously grounded in the explicit theory-model.

IMPORTANCE OF THE STUDY

When ordinary human language is viewed as a process by which men apprehend and represent their world and express how they feel about it, language becomes more than an arbitrary system of sounds or graphic signs. It then becomes a vital function of man's capacity to cope effectively and intelligently with new situations and to accommodate
himself to them. Thus, we must include mind and society in the study of language in order to treat mind, language and society as interrelated and interdependent parts of the human process. This cross-disciplinary approach, by studying human learning, socialization, and cognitive processes, should help us to understand how language works. In a word, the study of language can be enhanced by the study of man, and the study of man, by the study of language.

The holistic view of language considered here has definite implications for a theory of the curriculum, especially in the area of study bearing responsibility for teaching students about language. Admittedly, a curriculum theory of the language process is beyond the scope of this inquiry, but indications of what a curriculum theory should take into consideration as a logical consequence of the view of language developed here are pointed out. More important perhaps, not only would the emergent suggestions provide a basis for the validation of any schema herein developed, but also they would provide a point of departure for further work by theorists and practitioners in the discipline and in curriculum development. It is in this area that the administrator of curricular development must lead by establishing the primacy of sound theory building with ensuing models precedent to any implementation of actual pedagogical practices.

The study uses the term holism in its contemporary physiobiological sense which postulates that organisms or systems of organisms and their relationships, when viewed as wholes and not as the sums of parts, exhibit unity and organization. Each dynamic whole is made up of transacting sub-wholes which manifest the attributes and properties
of the entire system; hence, the whole is greater, or other, than the sum of its parts.

Five basic assumptions focus on the importance of the study as it developed a schema to account for the language process constituents:

1. A theory of language should precede a theory of educational practice.

2. A theory should be developed deductively from a conceptual whole which accounts for the functions of language in human culture in general, and its relationship to individuals seeking and finding knowledge about, aesthetic pleasure in, and effective control of their performance with language.

3. Any such theory has implicit views of man and nature. Thus, such views should be made explicit in order to know the consequences of acting on the theory. Man's capacities when extended by his ability to symbolize appear without limit; hence, they cannot be reliably predicted.

4. A curriculum theory of practice is best developed from explicit conceptions, processes, and structures devised through the activities of scholarly communities.

5. Teaching about language is essentially no different from systematic inquiry into the language process itself; it involves encounters with past and prevailing ideas, with problems in creating linguistic productions, and with hypothesis testing.

There have been recent studies in the scientific structure of language with a view to classroom application; they are in large part derived from descriptive, structural and transformational linguistics. While each promises to revolutionize the teaching of English, it is
well to be cautious in accepting any such definitive views of language derived from a particular philosophical tradition, without examining its implicit views of man and nature. Educators must make such views explicit so that they may know what kind of view of the individual is being promoted. It seems safe to assert that a teacher taking the homeostatic or limited view of man's capacities, consciously or unconsciously limits his students accordingly; his conception of student abilities to learn certain things in certain ways automatically shuts off alternative goals and approaches which would perhaps be less restricting. Thus, it would not usually occur to the teacher to try any other mode of conceiving and structuring the content of the subject or ways of teaching it. It becomes important then, to encourage curriculum and instruction specialists, discipline scholars, school administrators to look at alternative theories of teaching and, in the instance of this inquiry, of the language process with the expectation that the English curricula and concomitant practices will be re-examined and re-designed to suit a more liberal view of human capacities.

LIMITATIONS

The view of language promulgated here must of necessity be a relatively low-order description because in a holistic schema the larger whole governs the constituent wholes; that is, an infinitely more inclusive system is probable, but outside the present limitations.

Although exolinguistic or nonverbal features play an important role in interpersonal communication, as Hall has shown (1965), this study was limited to linguistic communication. Exolinguistic features
usually consist of signs and signals, as Cassirer has defined them, and language in its highest and most reflective use consists of symbols. Signs and symbols being of a lower order are subsumed within the present schema.

Moreover, language is regarded as a continuous extension of an individual's cognitive and manipulative activity, rather than as an independent medium which uses arbitrary signs for the transmission of information from one person to another; thus, the semantic aspect of language receives more emphasis than grammar. In this view, meaning is held to be a field within which the subwholes of grammar, syntax, speaker, listener and situation interact. The study treated language at the semantic level and excluded treatment of linguistic forms per se.

Furthermore, the shift of emphasis to semantic operations helped to dispel the distinction between the psychological and logical (inner and external) aspects of languages, as well as the distinction between individual behavior and group tendencies. For in an actual speaking situation the individual does not look beyond himself for the forms of speech, but inward to the assimilated and adapted system of language he has learned through experience and education. As Mead (1934) suggests, a distinctly human mind and self emerge through socialization and the use of language, resulting in a self-aware, controlled, reflective, competent use of processes which have become an integral part of the self. A self so conceived is characterized by the ability to become socialized, to use symbols, to regard its own consciousness objectively, to take the role of the other, to store and retrieve information systematically, and to modify its impulses both
through the assimilation of rationality from an existence in society, and through covert rehearsal or experimentation with alternative courses of action directed toward particular ends.

Two aspects of language which receive greatest emphasis and which seemed to cooperate in the elucidation of the existential meaning of an individual's awareness of the relations of things in the world, were the metaphoric and the discursive (or rational) modes of thinking and speaking. The first appears to be a primitive, possibly universal form of symbolic gesture which attempts to compress a world in flux comprised of personal intentions and experiences into a brief phrase of telegraphic quality. It is a compact and powerful generative matrix. The second grows out of the first. It appears as skillful and explicit use of language. Its most developed forms are explanation and theory. The first deals in the amalgamation of resemblances; the second, in the articulation of differences. The point is that this inquiry did not focus on the minutiae or the everyday, inconsequential uses of language which reveal little of the deliberative activities of persons struggling to express ideas of extreme complexity. Thus, to concentrate on consequential uses of language, the study attended primarily to such highly developed uses as discourse between neophyte inquirer and teacher, dialogues of scholars in the disciplines or literary productions of writers as sources where meanings are complex and important to understand as products of the reflective thinking of persons whose use of language, more than anyone else's, manifests self-awareness. This restriction of inquiry to skillful uses of language permits examination of rich and selective instances of the self-reference of language, and
broadened the inquiry to take in the larger context of human transaction.

The uses of reflective thinking and speaking—soliloquy or inner dialogue—according to Dewey (1933), occur as truly novel events, where symbolic linguistic behavior permits the individual to explore situations and alternative courses of action without participating directly in their consequences. It is this feature of reflective thought and speech to which Cassirer (1944:27-40) refers when he says: "Symbolic thought and symbolic behavior are among the most characteristic features of human life . . . that the whole progress of human culture is based on these conditions, is inevitable." Without symbolism man's life would be like that of the prisoners in the cave of Plato's famous simile. As Cassirer continues:

Man's life would be confined within the limits of his biological needs and his practical interests; it could find no access to the 'ideal world' which is opened to him from different sides by religion, art, philosophy, science.

Cassirer has also noted that the line dividing the distinctively human world from the animal world was the same line which divided propositional language from emotional language. Thus, if the operations of language are to be observed in their more distilled and intelligent uses, inquiry should be restricted to sentences or larger units which propose something in the domain of intellectual discourse. The restriction requires that the purposive nature of the speaker's utterances be granted, otherwise the orders of analysis would be almost nonsignificant. The assumption of purpose in the speaker's message involves crediting both speaker and listener with the intelligence and capacity for making rational judgments about the utterances based on
experience and reflective, critical thinking. The role one takes when taking the role of the generalized other, as Mead notes, must be to a great degree universal, hence interpretation of a speaker's message should be accessible.

The view of language here was through its holistic and semantic operations. Instrumental in these operations are the metaphoric and discursive modes of language use. Such uses, however, are observed within a context which included the situation, the persons engaged in dialogue, the subject of the dialogue, and the linguistic medium. Moreover, attention was restricted to intellectual discourse on the assumption that the skilled uses of language in expressing novel conceptions and in formulating disciplined knowledge can reveal more about the nature of language than its ordinary social uses.

DEFINITION OF TERMS USED IN THE STUDY

**Language**

A specialized and complex system of cognition often manifested in speech and writing.

**Communication**

Social interaction through man's cultural extensions, including language.

**Holism**

Used here in reference to contemporary physiobiological notions which postulate that organisms or systems of organisms and their relationships, when viewed as wholes and not as aggregates of parts,
exhibit unity and organization. Each organic whole is comprised of transacting subwholes which manifest the attributes and properties of the entire field or system, hence, the whole is greater (or other) than the sum of its parts.

**Retroductive Theory Construction**

The assumption that all inquiry is directed toward knowledge production.

**Theory Model**

The systematic statement of the scientific "hunch" (the conceptual structure borrowed or invented by the inquirer serving as a guide to relevance in the collection of supporting and discrepant data) which begins the process of inquiry.

**Retroductive Method (from C. S. Peirce)**

An interdisciplinary conception whereby the scientific theorizer begins his formulation by selecting wanted aspects of the theories which first suggested the "hunch" to him. He then sets about devising a model on the basis of these in such a way that all elements appear consistent, comprehensive, and adequate--this is the basic "core" or schema from which a theory may be elaborated which would develop cognitive claims, set forth terms, relate terms to hypotheses, and derive postulates from the hypotheses.
ORGANIZATION OF THE STUDY

Chapter I presents an introduction to the study and includes the Problem, Importance of the Study, Limitations, Terms, Sources of Data, and Procedure.

Chapter II contains an overview of the context of language theory from which the problem originated:
1. Background of the problem of the nature of language.
2. Survey of pervasive theories of language and learning.
3. Overview of two contemporary positions in the study of language: (a) reductive analysis (inductive), and (b) holism (deductive).

Chapter III discusses the role of man in the language process as knower, symbolizer, learner, speaker, and listener.
1. Language learning and personal meaning.
2. Language and reflective thinking.

Chapter IV contains a description of the constituents of the language process from which a schema is to be derived:
1. The synergism of the language process reveals the order and unity of discourse.
2. The units, values and transactions of speech.
3. Experiencing communication and interpreting meaning.

Chapter V is a systematic description of the schema itself:
1. A schema of language reveals the unity of diversities of the language event.
2. Theoretical theory-model.
3. The language event examined as a whole system.
Chapter VI contains a series of suggestions concerning the possible implications of the schema for a curriculum theory of the language process developed.
In years past, scholars inquired into the origins of language with an expectation of increased understanding of its nature. Cassirer has more than adequately surveyed these speculations and investigations, in the context of the history of philosophy, in his *Philosophy of Symbolic Forms* (1953-57), and more particularly in *An Essay on Man* (1944). He suggested, for instance, that the problem of language has always been inextricably bound up with the problem of knowledge: In the philosophical idealism of Plato, Descartes and Leibnitz, language was viewed as derivative from the etymon or the true and original forms of language in the realm of the uncreated Ideas. The empiricists, Bacon, Hobbes, Locke, and Mill, generally regarded language as a convenient system of logic for categorizing the objects of sense perception, in turn prompted by the human apprehension of general principles in nature. Influenced by empiricism, the philosophies of the Enlightenment, represented by Condillac, Maupertuis and Diderot, approached the problem of knowledge through the systematic compilation of discrete linguistic data, in an effort to catalogue the totality of man's knowledge of natural science. In reaction to the German Romanticism of Kant and Hegel, the humanists Giambattista Vico and Johann Herder rejected metaphysical theses of the
supranatural origins of language and instead sought to discover the origins in human operations. Vico thought he discerned the beginning in man's primitive, myth-making functions, while Herder speculated on the possibility that language appeared in man as a skill developed in the process of reflectively abstracting from the contents of his cognitive operations. Wilhelm von Humboldt, one of the first to undertake the scientific classification of the languages of the world, concluded that the words and rules of language possessed reality only in the act of connected speech, and that it was not a ready-made medium but a continuous process of the repeated efforts of the individual to utilize articulated sounds for the expression of his thought. August Schleicher, a convert to Darwinian evolutionism, proposed that interjectional and emotional sounds and acts, based on certain biological needs and used according to certain biological rules, could lead to the understanding of speech as an evolutionary process from these fundamental instinctive outcries. Finally, modern linguistic science, having emerged as an autonomous discipline from cultural anthropology and retaining its orientation of scientific realism, currently describes language as a continually changing, arbitrarily determined medium, based essentially on lawfully ordered sound-symbols, each conveying meaning (and thus knowledge) only in relation to referents in a given cultural context.

This cursory survey of historical approaches to the problem of knowledge and language reveals that all seem to share one of two fundamental points of reference corresponding to two modes by which humans are traditionally surmised to have direct perception of the
external world: objects either impress themselves directly on minds through the senses, simultaneously associating themselves with the perceived word-object which society has assigned to it, or minds know only their consciousness of the objects, not the objects themselves, and since consciousness is funded from earliest childhood with linguistic categories or forms, minds perceive nature in terms of corresponding verbal objectifications. The paradigm corresponding to the first view would be that of a closed and mechanistic system, while the second would be that of an open and dynamic, albeit subjective, system. Whitehead (1959:30 ff.) has assigned these two positions in modern philosophy, respectively to the empiricism of Hume, and to the transcendental idealism of Kant, and has noted that all subsequent epistemologies and linguistic conceptions are essentially indebted to these positions, being but elaborations, compromises, and variations which attempt to resolve problems inherent in each view.

The question of the origin of language now appears to have been an unproductive one. Instead, scholars in recent years have been asking more specific and productive questions about the purpose of language, children's acquisition of speech, the fundamental principles of language, how the components, structure, and syntax of speech relate to reading and writing, the "meaning of meaning," and the relations of languages to men's thinking, perception, knowledge and culture. Owing in large part to the empirical orientation of the age, most of these accounts have come from philosophical logical analysis, behavioral psychology, or linguistic science. It thus became the problem of this inquiry to select from the multiple views of language held by each of the relevant
disciplines those views which were not only compatible with each other but which are consistent with the assumptions made in the specification of the problem: a liberal view of innate human capacities; the value of human language, thought, intuition, and imagination in the evolutionary emergence of higher-order conceptions of man, existence and nature; the centrality of the individual self, in his private and social contexts, to human knowledge.

PERVASIVE THEORIES OF LANGUAGE AND LEARNING

The theories of language most widely held today all have implicit or explicit relations to current learning theories. For example, a survey of the spectrum of scientific views regarding the structure of language, in expanded form, is available in an issue of College English (1965) devoted to articles on linguistics. A selective summary of these will be sufficient for purposes of contrast. As a heritage from Leonard Bloomfield there exists the standpoint that the structure of language is to be found in the sound-system of the native speaker; that is, the structure of the phonological and phonemic aspect which constitutes the morpheme. The main exponents of this notion are Fries, Trager, and Smith. As a heritage of cultural anthropology and of the social philosophies of Dewey and Mead there exists the conception that culture is communication; the structure of the language is to be found in man's interaction with his environment--his society and culture. This view has been promoted, at least in part, by Sapir, and to a large degree, by Hall, particularly with respect to nonverbal aspects of language.
Within the tradition of scientific realism, yet rejecting the purely descriptive approach to linguistics in favor of a prescriptive schema, is the work of Chomsky. His generative approach to grammar holds that the structure of language is to be found in the relational strings which underlie a finite number of kernel sentences from which most common sentences are generated and transformed. Roberts and Newsome have developed classroom applications of this conception.

Among those operating within the tradition of philology and dialectology, there are scholars of widely differing viewpoints. Pei, a romance philologist, has been most vocal in rejecting the "permissive" notions of descriptive linguistics. The structure of language exists, for him, in its formal, traditional, and normative grammars and in its history. On the other hand, Nelson Francis has found it possible to approach language within a historical framework while retaining the validity of structural linguistics over normative conceptions. Webster's Third International Dictionary was a labor from within the latter framework; however, the furor its publication aroused among conservative English teachers and certain philologists attests to the continuing strength of the normative, prescriptive point of view.

Pooley, Mencken, and McDavid are among those who are concerning themselves with the lexical domain of language. Their attempts to arrive at definitions, synonyms, and antonyms within the realm of contextual meanings and usages actually encountered in discourse, and the dialectical variants occurring within a culture, grant for the most part the relevance of linguistic science to the problem of meaning. They also recognize, however, that the study of
meaning requires a framework beyond that which linguistic and transformational grammars, as Chomsky readily concurs, are capable of providing.

Pike and Fagan have been concerned with providing just such a framework, one which would permit the formulation of language theory in all its aspects. Pike has chosen to view language as structured in three orders: particles, waves, and fields. By beginning with his construct of the "tagmeme," a functional word or phrase slot available for variant grammatical constructions, however, he is apparently attempting to explain the conditions of the field through an explanation of the particle. Fagan's concerns have been with the levels of meaning achieved through the literary uses of words ranging from scientific (as simple signs) to the "artistic" (as universal symbols) in the interpretation of literature. Hence, "a river," "the river," "The Mississippi River," "Ol, Man River," and "The River of Life (or Death)" constitute the various levels at which interpretation should proceed.

One final notion of language theory to be explored here is that of General Semantics, not so much because of its relevance to the structure of language but because its views are so pervasive. Growing out of Korzybski's *Science and Sanity* (1958; Ist. ed.). General Semantics has gathered a following through the labors of such scholars as Hayakawa's much reprinted *Language in Thought and Action* (1949). While "meaning" in the broadest sense of the word is the primary concern of the General Semanticist, there underlies almost all attempts to define verbal situations an assumption that words are maps
representing real "territories." Misunderstandings are avoided, then, if one will be careful to compare "maps" and the territories they represent. As the Harvard psychologist Miller (1965:17) points out, however, the reference of a word should never be confused with its meaning, which is a much more complex function.

One of the most pervasive theories of learning which is found implicit in many current teaching practices and particularly in programmed materials is a modern version of classical conditioning espoused by Hull—see Hilgard (1964). Such a position regards man as a relatively simple organism responding to internal or external stimuli in a more or less linear fashion, through mediating intervening variables or pre-conditioned responses. In such a system there is no possibility that the individual may affect his response consciously or through any cognitive act of his own. Opponents of the view have often characterized it as a "telephone switchboard" conception of human thinking, where a single, direct input yields a single, direct output. The characterization is, of course, oversimplified; however, teaching practices which encourage rote memorization of word vocabulary lists, oral drill, and imitative responses manifest an implicit tabula rosa conception of mental activity. The Trager, Smith, and Fries notions of language, for example, imply that men learn language by fairly simple imitations of the sound system and morphological elements available in the environment. As will be shown in the following chapter, a number of studies would indicate that the child learning to speak goes beyond mere imitation to generate phrases of his own, as evidenced by his systematic errors and problems with irregular structures. It is
important to make the distinction here, as Brooks (1960) does in *Language and Language Learning*, that the learning of a language and learning about a language require two distinct levels of cognitive operations. The first requires a "feel" for the language, its intonation, sound system, etc., which seems more readily and accurately acquired through frequent performance than through focal attention to syntax, grammar, and other formalized aspects, which would be the approach required for the second. Second-language teaching practices stress audio-lingual drill, as a rule, to develop this performative competence, while most first-language teaching emphasizes the presentation of formal aspects, apparently regarding the productive aspects of the language to have been mastered earlier. As noted in the first chapter, study of the formal elements of language appears to have little to offer in the way of improving a student's language skills. Hence, if grammar is taught it should be with the recognition that it is largely extraneous to competent performance in the language. Piecemeal drills in the sounds and forms of language, however, do not seem to be a solution to the development of intelligent skills in language either. Polanyi (1958:54) has suggested that this kind of teaching is best conducted in an apprenticeship situation.

To treat language as entirely culturally learned, as do most cultural anthropologists, is in effect to take the point of view of the conditioning and stimulus-response learning psychologies; for in these, language learning is largely a passive activity. Dewey and Mead, however, recognized that instead of being a passive receptor, the individual is a dynamic explorer of his environment.
(not necessarily physical) with which he interacts and, consequently, achieves success and satisfaction through efficacious mastery of relevant aspects of it. Certain cognitive psychologies have evolved out of these conceptions, principally those of Piaget and Bruner. Learning is a heuristic process, and each discovery in the operations and functions of language assists the individual to perfect his competence in dealing with reality, in its verbal aspect, through an increase in linguistic and cognitive power as Bruner (1966:5-7) has suggested.

Skinner, whose notions represent some rapprochement between conditioning and cognitive learning psychologies, is of some influence in education. Skinnerian or linear programed teaching machines have a following. At base, his view is operant conditioning, modified somewhat by the construct of reinforcement or "feedback." Such a conception provides for a two-way stimulus-response interaction, and attempts to account for an effect which would otherwise be cognitive, that is, the tendency of an organism to choose or reject certain responses from its repertoire. Language is here a form of overt behavior which is culturally and socially determined but modified within limits by the degree of reinforcement or extinction which has, respectively, strengthened or weakened the response. Chomsky has dealt very critically with Skinner's *Verbal Behavior* and, in effect, has demonstrated that the concept of reinforcement fails to refute the fact that the organism thinks; see here Fodor and Katz (1964:561).

Miller (1965:20) summarizes the problem of language and learning by pointing out that there are many kinds of learning: from
minute tacit skills to major cognitive reorganizations. Language teachers, he advises, should concern themselves more with the latter and less with the former, for language is more than overt behavior; it is thinking, reorganizing one's cognitive field, perceiving relationships, and shaping one's tools to cope with the external and internal worlds.

OVERVIEW OF TWO CONTEMPORARY POSITIONS

Any attempt to get at the nature of language suffers at the outset from the eternal paradox which also dogs epistemological statements, namely, that the study of language and knowledge necessarily involves self-reference. When we attempt to determine how and when we know what other persons feel, intend, or mean when they make a statement, issue a command, or simply proffer a greeting, we are involved in thinking about thinking, in speaking about speaking. In such a situation we are essentially observing the operations of our own thinking or speaking from the inside, and those of the other person from the outside. Thus, we are continually making judgments, albeit at a tacit level, about the effects of our own utterances on the person addressed, and granting him, to a greater or lesser degree, the capacity for making conscious judgments and responsible decisions about our thought processes and utterances.

Hence language, in the study of language, is both the object of the study as well as the medium by which inquiry and discourse proceed. This paradox has been addressed by Bronowski in The Identity of Man (1966). The paradox in turn generates another problem: the infinite
regress of contexts. For as one conceptualizes about language, the concepts themselves are mirrored in and by language. The use or invention of a language through which one might conceptualize without including the concepts themselves and thus escape the regress of assertions about assertions—see here Bertrand Russell and A. N. Whitehead's theory of types in *Principia Mathematica*—can only yield an impoverished facsimile of the natural flexibility and richness of human language. Such a symbolic system, by nature of its intended logical precision, would consequently be inadequate to the task of analyzing and determining the meaning of such a broad spectrum of propositions, assertions, and other typical linguistic activities with ordinary language similar to those suggested in Wittgenstein's *Philosophical Investigations* (1953:11-12). Nonreferential statements, fictional tales, and deliberately ambiguous poetic constructions cannot be treated in a logical manner. Nor do all linguistic activities, although they may use the same words and even appear to make the same statements, operate for the same purposes or follow the same "rules." In brief, Bronowski (1966:238) avers, we must accept the paradoxes of self-reference and infinite regress of contexts and go on from there, for it is precisely the capacity for self-reference which makes human language rich, thus able to cope with the task of analyzing and describing, in its turn, this very wealth of multiple meanings, ambiguities, and overtones: "Human language is richer precisely because we think about ourselves. We cannot eliminate self-reference from human language without thereby turning it from a genuine language of information into a machine language of instructions." In addition to the features of
self-reference and the regress of contexts, there also seems to be
general agreement that language may play two chief roles in the lives
of men: Language may be responsible for the emergence of reflective
thinking by establishing concepts, assisting in linguistic formulations
or reasoning, permitting naming and grouping, and by facilitating
interpersonal communication; and language may, at the same time, inhibit
or misguide thinking by inducing functional fixedness, bringing about
inadvertent erroneous associations, permitting untruthful formulations
and encouraging memory failure or miscomprehension. Further, the
many efforts of philosophers of language and psycholinguists in recent
years have been directed to the explanation of two other aspects of
interest here: the conceptual role of speech, discussed by Sapir in
Language: An Introduction to the Study of Speech (1921), and the
description of the conditions for truth in statements of fact, as those
which concerned the later Wittgenstein. There also seems general
agreement, as Polanyi has it (1958:69ff.), that there are three main
kinds of utterances: expressions of feeling, appeals to other persons,
and representations or statements of fact. Where disagreements arise is
in the matter of how these kinds of utterances are used. Those who
would treat speech as if it were independent of men take on the
philosophical commitment of logical analysis with the consequence that
the context of the language studied is narrow, attention is turned to
linguistic usage, rules and grammars, and the general symbols of
language are regarded as designating certain collections of objects.
On the other hand, those who would treat speech as an instrumental
activity of men's cognitive, affective, and psychomotor capacities,
while avoiding nominalist conceptions, enter instead into subjectivist and metaphysical problems. The contexts studied are often in terms of wholes, and there is a shift from emphasis on logical meanings to existential meanings.

Of the various problems of language cited, self-reference, regress of contexts, language as an aid (or hindrance) to reflective thinking, conditions of truth of propositions, and meaning as a function of language use, the most central problem seems to be whether it is inquiry into linguistic grammars and usage or into semantic operations which will yield the most productive approach to the nature and functions of language. Chomsky (1957:102) has voiced his conviction that an adequate general theory of language would necessarily include both a description of grammatical and of semantic operations as sub-theories. It is possible, however, that a semantic theory is of more far-reaching consequence to human existence, as noted earlier, hence ought to be regarded as embracing grammatical theory just as a field theory in physics would subsume particle and wave conceptions. The semantic aspect would govern the formal aspect only in its use by individuals, for only in use do "grammars" and "meanings" converge and cooperate to produce a meaningful stream of speech.

To briefly review these two aspects: The external forms of language comprise in part the cultural and social endowment of the linguistic community. Alston (1964:61) further groups this into two areas, the traditional linguistic behavior of persons taken as a whole, which he terms "speech," and the abstract linguistic elements
and rules of grammar thought to underlie such behavior, which he terms "language":

Speech comprises the totality of verbal behavior that goes on in a community; whereas language is the abstract system of identifiable elements and the rules of the combinations, which is exemplified in this behavior and which is discovered by an analysis of the behavior. Not only the system as a whole, but also each element thereof, is an abstraction from concrete behavior. (This is a consequence of the fact that the element cannot be identified apart from an analysis of the system.

He is in effect making a distinction between the aggregated informal and conventional performances with words in a linguistic community and the generalized fund of analyzed and criticized formal knowledge about the operations of words, their combinations, and the tacit consensus about how they should be used. Both of these distinctions, however, ignore the personal processes a language user brings to bear on his speech--his convictions or sense of passionate commitment--when he communicates or expresses belief in the least personal form in declaratory statements of fact. It appears necessary to include such a dimension in order to avoid confusing two points of reference used in talking about language: the immediate and experiential speechacts of the individual and the formal grammars and customary usages of the linguistic community. Knowledge about language is the body of funded knowledge, an aggregate of the outcome of individual "knowings" which have been abstracted, explicated, and transformed into symbolic systems, and either articulated into disciplines, their literatures, or subsumed into the traditions and customary ways of behavior in society. Much of the knowledge about language has been shaped by the rational and critical faculties of scholars in analytical philosophy, logic, and linguistics.
On the other hand, the inner aspect of language, or as Polanyi (1958:106) suggests, knowledge of language is the direct and tacit "knowing" that the individual experiences when his awareness of the connectedness of certain perceptions increases through the symbolizing power of language. The personal component of language is that part of the external aspect which the individual has so thoroughly made his own that, while it permits him to transact with the community, his knowledge of it is subsidiary and inarticulable. Thus, language to Polanyi, Cassirer, Whorf, and others, is more than a conventional symbolic system—it is a world-view derived from experience and implicitly embodied in the system, an unspecifiable perception of the world which has been given form and use by the action of the intelligence of men, which, in a sense, predisposes thought and guides behavior. Sapir (1921:15) seems to concur by averring that language is much like a "prepared road or groove," a pre-rational function of symbolic expression which "works up to the thought that is latent... in its classification and its forms." Hence, the term "meaning" would refer to the semantic content of a linguistic proposal which arises in the play of language on thought and vice-versa, both in the mind of the speaker and of the listener, corresponding in turn, in a greater or lesser degree, to a body of common experiences shared by them.

Some philosophers have avoided the inner aspect of language because it is not accessible to experimentation. Austin's efforts, in *How to Do Things with Words* (1962), together with those of Alston (1964), have been attempts to gain access to this inner aspect by analyzing typical uses of language in everyday speech. Their
purpose has been to establish necessary and sufficient conditions for adjudging correct usage or misuse of language according to the correlative conditions of the logic of language. Austin (1962:147), aware that the attention to formal properties of language as such, to the exclusion of the actual uses of language, could lead to the misapprehension of its workings, focused on a "grammar of use" and attempted to develop categories which would accord with our intuitions about what we do when we use words. Accordingly, he attempted to make a functional distinction among acts. That is, when we say something, we are performing one (or all) of three sorts of acts: (1) we utter sounds that have sense and reference—this is a locutionary act; (2) we do something in the saying of certain words—this is an illocutionary act; (3) we do something by the saying of certain words—this is a perlocutionary act. Austin's concern is with the various locutions utterances (or sentences) have. Every complete utterance should be regarded as a speech act, as an action someone does with words. An utterance, then, is three things: (a) a form of human behavior, (b) a form of linguistic behavior, and (c) a form of purposeful behavior. Thus, an utterance must be considered as more than just a locution or group of words. An utterance, since it is a piece of human behavior, has an additional illocutionary aspect—propositional attitudes which implicitly or explicitly convey meaning from speaker to listener. An added component is the perlocutionary aspect—the emotions caused in the listener by the speaker's words; thus, the meaning of the utterance is the reaction the listener has to the speaker's message.
Austin was forced to conclude, however, that every utterance regarded as saying something should be subjected to a piecemeal investigation in terms of the context or type of situation in which it might occur. Such an analysis would permit one to concentrate on "the total speech act in the total speech situation" (Austin, 1962: 147), and to categorize genuine utterances (as opposed to those intended only to bring about an affective reaction in the listener) along a continuum from truth (the satisfaction of certain conditions by an utterance under certain circumstances) to falsehood, from happiness to unhappiness, and from factual to evaluative dimensions.

While Austin’s work has served to underline the degree of complexity of ordinary language and the importance of understanding the acts performed through language, it has also neglected the simplification of instances of use which would characterize a systematic theory. What is missed in these conceptions is attention to the language user, to what he intends when he says something, and to what determines his choices among socially shared linguistic forms to express this intent. Can one say that an individual is using the rules of language when he speaks if he is unable to articulate these rules or otherwise manifests that he does not know the rules when he makes systematic errors? Polanyi (1958:114) has commented on these viewpoints in the following selection:

These controversial questions can be attended to only if we use language as it exists to direct our attention to its subject matter and not the other way around, selecting instances of relevant cases to direct our attention to our use of language. 'Grammar' is precisely the total of linguistic rules which can
be observed by using a language without attending to the things referred to. The purpose of the philosophic pretence of being merely concerned with grammar is to contemplate and analyze reality, while denying the act of doing so.

Polanyi's own view suggests that the range of meaning permitted by the speaker's use of words, so-called "open terms" which may mean almost anything, is controlled by the "speaker's sense of fitness for judging that his words express the reality he seeks to express" (1958:113). Since for Polanyi there can be no objective knowledge without participation of the knower, he must also define the process by which the personal element cooperates with the formal. These areas characterize the range of relations of thought to speech:

1. The area where the tacit (subsidiary or instrumental knowledge) predominates to the extent that articulation is virtually impossible; we may call this the ineffable domain.

Polanyi's use of "tacit" suggests that nothing that we know can be said precisely, in the sense that no utterance can adequately state its own meaning. Polanyi avers that many times when something is known, it can be described with less than the usual preciseness, or only vaguely. If a person cannot say clearly how he rides a bicycle, the fact does not prevent him from saying he knows how to ride it. Thus, we may say we know even though unable to tell clearly, or at all, what it is we know. It is a matter of knowing the particulars in an instrumental manner, though focally quite ignorant of them.

2. The area where the tacit component is the information conveyed by easily intelligible speech, so that the tacit is co-extensive with the text of which it carries the meaning.
3. The area in which the tacit and the formal fall apart since the speaker does not know, or quite know, what he is talking about. There are two extremely different cases of this, namely (a) an ineptitude of speech, owing to which articulation encumbers the tacit work of thought; (b) symbolic operations that outrun our understanding and thus anticipate novel forms of thought. Both (a) and (b) may be said to form part of the domain of sophistication.

The listener's or reader's judgment about an assertion will depend largely on his attempts to adjust the "text," the conception suggested by it, and the experience on which it might bear, to one another. If text and meaning appear to fall apart, he may, as Polanyi has it (1958: 109-110) decide to:

1. (a) Correct the meaning of the text.
   (b) Re-interpret the text.
2. Re-interpret experience.
3. Dismiss the text as meaningless.

Every one of these choices involves the shaping of meaning in the light of our standards of clarity and reason. Such a choice constitutes a heuristic act which may display the highest degree of originality.

Polanyi thus avers that language is continually being reinterpreted in its everyday use, for, in a changing world, one's powers to anticipate unprecedented situations must somehow undergo continuous adaptation. Hence, static or lexical word-meanings are only the point of departure for a person speaking meaningfully. His stream of speech goes beyond culturally transmitted interpretations. Polanyi (1958:112) puts it thus:

The meaning of speech thus keeps changing in the act of groping for words without our being focally aware of the change, and our gropings invest words in this manner with a fund of unspecifiable connotations. Languages are the products of man's gropings for words in the process of making new conceptual decisions, to be conveyed by words.
It is worth noting here that Polanyi's theory of personal knowledge brings to bear the ideas of phenomenology and existentialism on the problem of language in a manner to credit intuitive methods for obtaining generalizations from which epistemological and linguistic hypotheses may in turn be deduced. He holds that there is a large component of potentially unverifiable assertions in scientific dialogue; hence it is only by evaluating the intelligence of the speaker in relation to the thing signified by his statement that one may determine whether to give credence to the assertion or not. For him, language is instrumental in providing persons with maps or models of the social, cultural and physical environments which later serve as guides to action in that context. A person's language, thought, and knowledge are virtually inseparable for they interpenetrate one another in complex ways. Polanyi's theory of personal knowledge avoids the charges of subjectivism and epistemological anarchy by granting all men a fundamental commitment to truth. Rather than dwell on the falsifiability of statements, then, the interpreter should approach a statement as a product of a passionate search for truth in knowledge which has been articulated as well as the speaker's competence would permit. It is thus evident that for Polanyi, words or symbols in themselves cannot communicate an understanding of themselves. Persons may make statements in such forms as will induce an understanding of the message, but the speaker will of necessity rely on the skill and intelligence of the person addressed for the comprehension of his message, of his speech act.
It should be apparent from the previous discussion that the major differences in approach to the study of language are derived from (1) reductive analysis, premised on inductive logic which holds essentially that the whole of language may be apprehended from a summation of its parts, and (2) holism, premised on deductive logic which holds essentially that the whole of language may be intuited, but also that the intuition is to be confirmed through analysis of the subwholes.

The next two Chapters study the constituents of the language process, a process which, viewed in its entirety, appears to function under the governance of a heuristic principle, (Frye, 1963:9) that assists men in their search for truth.

Chapter 3 begins a discussion of the holistic point of reference, the transactional and holistic nature of individual behavior, the heuristic quality of children's learning of their native language, and the process by which speech acts are initiated. These constituent behaviors, when coupled with the metaphoric and literal aspects of language to be discussed in Chapter 4, culminate in the meaningful language event. Briefly stated, the language event begins with the speaker's pre-vocal soliloquy—a groping for words to express an almost ineffable intent. The initial summary statement implies all that is to come, however; hence is an act of symbolization. The explicated stream of speech is the speaker's version of an adequate response to an inner desire to deal competently with a situation claiming focal attention in his immediate ambience. His listener, on
the other hand, participates pre-critically in this stream of speech through which he is led to a discovery of the theme—what the point of telling it was, or the speech seen as a total design. At the end of listening is the beginning of critical understanding; that is, the detached, focally conscious response to the speech as a whole. Here, the elements of the "narrative" are reconstructed and regrouped in a novel fashion wherein the meaning is perceived (Frye, 1963:8-9) both in terms of understanding and value judgment.
The previous chapter has attempted to illustrate, in a general way, the consequences for theories of language stemming from two particular philosophical stances: reductive analysis and holistic apprehension. It is now possible to discuss the anomalous situation created by the fact that the first originates in 19th century Baconian inductive theory, whereas the second originates in 20th century Einsteinian deductive theory.

Baconian theory asserts that "wholes" may be characterized by the analysis, identification, and description of all "parts," the sum of which constitutes the whole. The views of man, nature, and the act of knowing implicit in this theory would tend to characterize men as limited but clever animals, nature as a hierarchically ordered and fixed array of elements, and the act of knowing as analysis and summation.

A holistic theory based in part on Cassirer, on the other hand, would regard men as organisms quite distinct from animals by virtue of their emergent capacities to symbolize (Cassirer, 1944:24-25). As such their capacities would be unpredictable. Nature, particularly living organisms, would exhibit processes of reorganization within organic unities. But, most important of all, human knowledge would be
characterized by the nature of the knower. Hence, in this view, men are central to the processes of knowledge and language. The pursuit of truth in knowledge, the act of inquiry, and the act of making warranted assertions manifest the operations of men. Consequently, knowledge of oneself, of other selves, and of nature for purposes external to men (as scientific knowledge), or for its own sake (as aesthetic knowledge), exhibits a fundamental unity in the fact that it is man who apprehends and knows, Cassirer (1960:15-16).

**Man: The Knower**

Originally conceived by Plato and developed by Aristotle, the holistic or organic view of scientific inquiry posits that the whole precedes its parts. Such a view is implicit in Snygg and Comb's theory of individual behavior which is discussed in a section to follow. The clearest contemporary statement of the holistic position with which this writer is acquainted is "Systematic Psychology" an undated position by Raymond H. Wheeler and Francis T. Perkins of the Claremont Graduate School, Claremont, California. Briefly stated, the theory posits as its basic principles the unity and organization of all organisms in nature. These principles affect not only the knower but the organism as it is known. The wholes in nature operate as configurations of sub-systems; hence the parts themselves must be conceived as constituent wholes partaking of the fundamental unity and organization which is derived from their functions in and relationships to the whole. Increasing differentiation and specializations of these sub-systems may be perceived as one apprehends more completely the nature of the whole. Universals are the functions and phenomena are
the structures of reality. Structures and functional relations together provide the integrity and organization of the whole. A holistic conception of the language process, then, implies that language may be comprehended only in terms of the relationship between events and structures in their contexts, that is, in terms of man knowing and speaking in a language situation.

Further implications reside in the fact that only by conceiving knowledge as an activity of human inquiry does such knowledge have relevance for men; hence relevance is a consequence of the holistic view and is inseparable from the acts of learning, inquiry, and eventually, discovery. For when men are engaged in inquiry they continually uncover discrepancies in the conceptual model which has guided their procedures, as Kuhn has noted, and are thus impelled, in their passionate commitment to truth, to invent new theoretical constructs in order to overcome the apparent anomaly. Other implications of holism as a heuristic approach to human knowledge include the correlative functions of process, transaction, inquiry and synergetic activity which will now be discussed briefly.

The major premise of a holistic conception of language as process (rather than as random activity) is that language is the purposeful transaction of the individual with his environment. Its object is to preserve and enhance the integral structures or capacities of a particular kind of organism, in this case, as Cassirer notes, *animal symbolicum*. Man's capacity is, in effect, the product of developmental processes. They permit the fulfillment of innate capacities inherent in the design of the organism through their gradual
development from generalized functions toward differentiated specialization and organic maturity. Such a process is similar to that of cells in the bodily organ of an infant which develop from a state of generalized undifferentiation toward specialization as inner or outer cells, as maturation proceeds, their functions being derived from the function of the organ as a whole.

The transactional view of behavior which underlies the theories of Dewey and Mead departs from elementalist and interactionist theories by postulating that individuals respond totally to whole configurations of stimuli assimilated from the external world into the environment of the self, with the consequence that both the source of the stimuli and the self are modified and reorganized, for even the external world ceases to appear the same. Interactionism, on the other hand, would view the encounter as an essentially passive one. Two balls striking each other appear to interact; however, nothing has really changed. Transactions are the functions of processes aimed at fulfilling the requirements of the whole. Hence transactions are, at base, synergetic, that is, reciprocally beneficial and dynamic efforts to enhance the integrity of the whole. Thus continual reorganization is the constant in human behavior. Thinking, not mind, is an emergent quality from the continual reorganization of the self and the play of consciousness on things. Form emerges but has no substantive quality outside of processes and purposes. Speaking is also a quality which emerges from the individual's transaction with the society of men and is a factor in the emergence of thinking. What keeps transactional phenomenology from total submergence in relativism and subjectivity,
hence skepticism and anarchy, is the individual's socialization and
capacity for synergetic activity with others, and his ability to learn
to experiment and confirm. The emphasis here is on the total process
which includes the individual thinking, acting, and communicating with
others in a community of individuals acting synergetically within the
larger system of social and moral living. In contrast, elementalist
theories hypostatize, emphasizing the elements in a given system, and
as a consequence lose sight of relationships, functions, and processes.
Interactionism, on the other hand, lies at a point midway between
elementalism and transactionalism, and stresses limited process while
postulating the essential integrity of each participating element.

While the constituents of a process may be analyzed for the
purpose of clarifying and distinguishing complex functions within the
process, a meaningful conception of the whole arrives only when the
focally perceived, destructively analyzed sub-wholes are reintegrated
and apprehended through one's subsidiary awareness of the purpose or
functions of the whole. The reintegrated synthesis, however, is
different from the original, superficial apprehension, for now new
levels of meaning and understanding emerge through the perception of
the relationships of the parts of the whole. According to Polanyi,
one's grasp of a process will never be more than subsidiary, hence
largely ineffable and inarticulable (1958:88-89). The instrumental
but unspecifiable knowledge one may have of riding a bicycle, of
recognizing one's overcoat, is subsidiary. Focal knowledge occurs in
the act of fixing and analyzing some aspect from one's cognitive
"ground." Hence a holistic conception of a process of inquiry is not
to be known in itself but is known in terms of something already
focally known, one particular feature or even a paradigm, while the
ineffable remainder or residue must be reconstructed by the
imagination from previous focal experiences of the whole by visualizing
these aspects in three-dimensional form and by mentally exploring the
connections between these various focal experiences.

A holistic approach to a description of the language process,
then, must be regarded as a heuristic experience, in itself a voyage
of inquiry and discovery across the seas of language in search of its
seemial processes. The vessel is language and the tools, more of the
same. The course, as in any intellectual activity, is guided by
commitment to the search for coherence as the persistent striving for
the solution to the problem of language through what Polanyi calls the
"heuristic manipulation of articulate thought" (1958:301).

Intuitive knowledge or discovery, as Bruner remarks (1960:56-67),
favors the well-prepared mind. Cassirer (1960:18) concurs that it is
a labor of "persistent, patient steeping of oneself in the work of the
separate sciences." Hence, the heuristic principle inherent in the
holistic approach is operative when an individual's cognitive structures
are so reorganized that patterns of relationships appear and novel
ideas or recombinations emerge.

The holistic approach is not without controversy. Ernest Nagel,
representing logical empiricism, indicates in The Structure of Science
(1961:394ff.) his conviction that there is not yet a general criterion
by which it would be possible to identify truly organic systems
operating functionally as distinct from systems which are merely
summative. He discusses eight types of uses of "whole" as correlative distinctions which recur in the literature of science and philosophy, concluding that, while there are some wholes that may be constructed in piecemeal fashion from a juxtaposition of parts, such as a clock, a salt crystal, or a molecule of water, there are other systems, a carbon atom or the solar system, which do not seem to yield to additive analysis. He accounts for this, however, by suggesting that present technological limitations may preclude our observing minute causal and interpenetrative effects which, if known, could supply the missing information for a complete additive analysis of the system; hence "the mere fact that the parts of a system stand in relations of causal interdependence does not exclude the possibility of an additive analysis of the system" (Nagel, 1961:394). If this interpretation of Nagel is correct, additive analysis would then appear to lead to an inductive approach to theory construction. In a holistic schema, however, the emphasis is not on elements alone, themselves insubstantial organizations of energies, but on functional principles which govern the entire organic configuration, and thus govern the relationship of parts. Lower-order principles cannot, from this point of reference, be added to yield higher-order principles. The latter must be derived deductively from a hypothesized high-order theoretical schema. Karl Popper (1959: 21ff.) further rejects the inductive principle, especially with reference to contemporary approaches stressing linguistic analysis and model languages, by noting that these deal with such minute orders of events that any results would be so correspondingly insignificant as to fail to contribute to a
comprehension of the growth of knowledge and formulation of a consistent cosmology.

The holistic conception of the process of linguistic communication to be used here, as noted earlier, is committed to a deductive approach, compatible with a "system" teaching theory. It regards the individual as a complex system of processing and producing capabilities within a field of the external body of language, other individuals, and the "systems" of society. Linguistic communication would occur within areas of their field when there is a contiguity of individual systems, a contiguity including the factors of similar languages, purposes, skills, all given form by like experiences in a culture comprised of symbolic forms.

Having established, through a holistic conception of the ways men come to know their world, the unity of knowledge, it is now possible to study the implications, for the language process, of men's capacity to both represent and express this knowledge in symbolic form.

Man: The Symbolizer

Cassirer's conception of symbol is a crucial one. Symbols are at least twice-removed from the physical objects, events, or states of being which they represent: the original response to an experience of the thing is the first abstraction; the linguistic form assigned to the response is the second. This ability to abstract and manipulate these abstractions signals the emergence of a distinctively human mode of apprehending the world, for man now deals with experiences mediated by language. Language in turn permits him to represent or express
the connectedness of things in the world. Man has thus created symbolic networks which link him to his fellow man. These networks are the fabric of his intellectual, aesthetic and moral activity. They enable him to go beyond his physiological limitations and physical environments to both understand and create non-physical systems or environments. Included among these are the mass media, the disciplines of knowledge, orders of organization in society, literature and the arts, and educational systems and technologies.

The general implications of this conception suggest that men must be regarded as the irreducible elements in any human situation, including the language process. An understanding of language, then, requires the understanding of men, of the way men use language symbols to express or represent some content of consciousness. An appreciation of these symbolic networks, manifested in culture, when seen across time and place, provides significant insight into the otherwise inaccessible workings of the human consciousness. Some of these insights include the observation that language is the chief process men use to seek and find knowledge about themselves, others, and the world in general. Such knowledge may also be sought for the self, that is, for its appeal to the aesthetic and affective domains of the self. Language thus conceived is a continuous extension of men's cognitive, manipulative, and responsive activities by which they seek to control and comprehend their environments. Language functions both to represent and express phenomenological reality through symbols, and iconic and enactive verbal gestures. Since language is used for a purpose, it is a significant process, not simply a random activity; it consists at
its root in inquiry (through reading, discoursing, listening) and in
the making of warranted assertions (through reflective thinking,
speaking, and writing).

Man is, as the preceding discussion has attempted to show,
central not only to the processes by which knowledge is sought and
accumulated, but also to those processes by which it is represented
in discursive language or expressed in sensuous and kinesthetic forms.
But what is the nature of man? Is his behavior consonant with these
theoretical capacities, especially as they concern his learning of the
language process? The following sections undertake to answer these
questions. The first deals with the determinants of human behavior;
the second, the systematic operations of the language learner; and the
last, the reflective character of thinking, speaking and listening.

THE DETERMINANTS OF HUMAN BEHAVIOR

Before beginning a discussion of individual behavior and
cognitive development it will be helpful to an understanding of this
approach to distinguish between behavioristic and cognitive-field
conceptions of human behavior, many of which correspond with the
reductive-holistic or the S-R and social dichotomies cited earlier in
connection with theories of language and learning. Briefly, the non-
cognitive view stresses the manipulation of the organism by its
environment; hence the organism's activity is one of reactions. The
cognitive position, on the other hand, lays stress on the inherent
capacity of the organism to manipulate its environment; hence its
actions are in terms of response. The former emphasizes the mechanistic
basis of behavior, while the latter emphasizes the social and
phenomenological sources of stimuli. The first regards parts as
prior to (and determinants of) the whole, while the second reverses
the order of occurrence and determinance. Where learning is perceived
as sequential and aggregative by the first, the second perceives it
as occurring in sudden concrescences and reorganizations. In the one,
verbal behavior is regarded as imitative and machine-like; in the other,
it is regarded as evidence of symbolic integration and cognitive
reconstruction. The former affirms the priority of learning theory
over a theory of teaching, whereas the latter affirms that only a
teaching theory can account for all relevant factors in a complex
educational situation. Where the first uses the methodology of the
artificial laboratory situation, and of statistics, with its emphasis
on description, groups, and norms, the second indicates a preference
for individual and clinical approaches, with observation occurring
under as natural circumstances as possible and within an evaluative
framework which prescribes conditions under which certain acts might
tend to occur. As will be evident in the section on children's
early verbal processes, language learning appears to occur in a manner
quite distinct from that for which non-cognitive theories can account.

*Man, the Synergetic System*

One cognition theory which focuses primarily on individual
behavior is that developed by *Snygg and Combs (1949).*
It is derived in large part from the conceptions in the philosophies
of *Dewey* and *Mead,* with several notable exceptions to be
discussed following the summary below. The conception is important
to the elaboration of language constituents for three principal
reasons: (1) it provides a description of the source of all language
events—the individual—in terms of the instrumental aspect of an
environing phenomenal field, (2) it treats the search for "meanings"—
the connectedness of aspects of the field and their focal relevance
to the individual for effectively achieving immediate and remote ends—as the motive power underlying behavior, and (3) it focuses on
individual rather than normative behaviors. The following general
postulates are inferred from Snygg's and Combs' general presentation.

General Postulates

I. The universe, including man, exhibits unity, interdependency,
purpose, stability, regularity, and orderliness when viewed longitudi-
nally in time; it exhibits disruption and instability when viewed at
a given instant in time.

II. Each body in the universe exists in a "field" which is the
result of the spatial-temporal proximity and interdependence of other
bodies. This proximity and interdependence tends to disrupt "adjoining"
fields; yet each body and field tends to maintain its basic pattern of
organization and unity owing to inertia.

III. The bodies adhere to all physical and biological laws and
specifically those of modern physics with regard to energy exchange and
biology, both with regard to the relationships of wholes and parts,
and to genetic developmental conceptions.
IV. The universe and the individual are an isomorphic physio-
mental unity: the world cannot be known except subjectively and
relativistically, for the individual perceives the world as it is
manifested by his mind.

General Behavioral Postulate

Men, as living, motile biological organisms, have evolved as
superior forms owing to their highly developed "distance receptors"
which produce their spatial and temporal awareness of the world. This
awareness includes symbols, constructs, concepts, etc. which constitute
the individual's "phenomenological field". Furthermore, all "fields"
are "aware" of all other "fields" to a greater or lesser degree.

Specific Behavioral Postulates

I. According to the general postulates, behavior is "lawful."
   A. This belief is justified by the observation of
      regularity in the universe.
   B. The observation of regularity is a function of our
      particular frame of reference.
   C. The apparent absence of lawfulness is the result of an
      inappropriate frame of reference.
   D. The perception of the absence of lawfulness negates the
      possibility of environmental and behavioral control and
      prediction.

II. According to the general postulates, conscious awareness
    is the cause of behavior.
A. Man is constantly interacting with and adjusting to his interpretation of his physical environment and of individuals in that environment, to which he responds with his whole being.

B. Man's basic need is that of survival; survival depends on the stability of the phenomenal field and the integral functioning of the individual in his environment.

1. The phenomenal field, the sum total of an individual's conscious awareness and experience, functions effectively to preserve its own stability, organization, and integrity, and that of the individual.

2. The individual constantly seeks energy and materials in his environment which will aid him to protect himself from disruptive threats from the outside.

3. An increase in spatial and temporal awareness allows the individual to expand his field of action and to increase his ability to maintain the organization and stability of his field.

a. Learning, as the principal manifestation of behavior, provides the individual with an increase in awareness.

b. Learning is the product of the experience, intellectual and maturational growth, and development of the individual.

c. Discrimination of facts, events, etc. in the individual's phenomenal field, i.e., bringing them
from ground (subsidiary awareness) to figure (focal awareness), is the function of learning and thus of behavior.

III. According to the general postulates, the individual's behavior has a one-to-one relationship with his phenomenological field.

A. The nature of the phenomenal field is such that it includes the individual's entire personal experience of the universe and of himself as he perceives his relation to it in terms of figureground at the instant of behavior.

1. The phenomenal field is fluid and undergoes change when viewed at a given instant.

   a. Change is the product of the individual's continual oscillating shift in perceptual and discriminative focus from ground to figure and vice-versa.

   b. Change is perceived when the individual's field is affected by change in another person's field.

2. The phenomenal field is stable and organized when viewed longitudinally.

   a. The phenomenal self is the product of the basic unity between the person and his field.

   b. All items in a field interact or exhibit independence according to the focus of perception.

   c. New items in a field are colored by their relationship to the whole.
d. The selection of the individual's perception is imposed by the phenomenal self.

B. The phenomenal field is the determinant of behavior.
   1. The factors in determining the behavior of an individual are those, and only those, spatial and temporal factors which are experienced by the individual at the time of his behavior.
   2. The individual's awareness of these factors is the function of the lowest possible level of discrimination which is consonant with the satisfaction of the individual's need.
   3. Behavior and the field are isomorphically related; thus one may infer reasons for the activity from one or the other.

Man, the Seeker after Meaning

In brief, the basic units studied in this cognition theory are the meanings which lie in the phenomenal field of the nonuniversal individual self behaving. The self actively differentiating and organizing the details and meanings in his phenomenal field in response to the need to preserve and enhance the phenomenal self in a specific activity is the self behaving. The methodology of the theory involves inference from overt whole behavior of the contents of the phenomenal field at a given moment and by an examination of their relationship to the contents of the external environment. By describing the momentary structure of the phenomenal field of the behaver as he functions in a natural situation, the clinical or field
observer is led to understand the individual and the laws governing his behavior in terms of (a) the particular aspect of the need for survival, i.e., seeking to reestablish balance, reorganizing the field, etc., which is fulfilled by the activity, (b) the particular experience or aspect of his subjective reality, past, present, or future, which he has brought from "ground" to "figure" in his attempt to cope with the situation by defining its meaning, interpreting it, and directing his behavior toward a goal, and (c) the relationship of this particular configuration of focal awareness to subsequent behavior. Thus inferences about the phenomenal field may be checked and modified toward greater predictive accuracy in the light of subsequent behavior. The practiced observer is assisted in the process of predicting or projecting by the fact that there is a degree of commonality of experience and modes of behaving among individuals. By asking himself "Why did he do that?" and "Under what circumstances would I have done that?", the observer may draw a provisional introspective inference to be modified by later observation in field or clinical situations.

In the preceding outline, the general assumptive postulates have been inferred from Snygg and Combs' presentation. Their conception, described as phenomenological, purports to discover laws for specific individual behavior, it should be noted, and is concerned primarily with the analysis of the function and structure of the field in which the behaver behaves.

This theory of individual behavior is intended to promote a new and systematized conception of nature. The scope of the theory
includes the understanding, control (therapeutic correction), and prediction of individual human behavior, as the result of a shift of frame of reference. The new frame of reference is the observation of externalized "whole" behaviors of an individual from which it is possible to infer the functional nature of the field producing the behavior. Once the field is understood, subsequent behavior can be predicted nonstatistically, notably in the case of the unique situation. Snygg and Combs expect that once an observer secures an understanding of the subject's field by inference or reconstruction from actual behavior, comprehends what fields are alike and how they change, and projects the subject's future field and consequent behavior, he will be able to predict behavior with a great degree of certainty, even to the degree of enabling him to determine normative behavior.

The theory of individual behavior has undertaken to deal with certain problems of so-called objective psychology. The authors have seen that the external observation of behavior and the positing of certain physical or physiological constructs to account for discrete and apparently unrelated micro-acts, such as muscular movements, had failed to resolve the central problems of individual behavior. The "external" approach was predictive in terms of central tendencies or odds as to what the "average" 12 year-old would do, "all other things being equal." As a result, individual differences were regarded as illusory or secondary because the acts of living organisms seemed disorderly and, statistically, only those acts performed in common and agreed upon by observers could provide "norms." The result was a
catalogue of microcosmic "behaviors" which, summated, did not describe a "whole" behavior and which was much too complex for practical application to prediction and, consequently, to therapy or treatment (control). Furthermore, it was noted that individual behavior differed markedly from norms.

What made the new theory possible was the discovery in modern physics and biology that a new and more comprehensive frame of reference was necessary within which new facts could be regarded as true and regular. It was through modern physics and biology that the "unity of science" came to be posited with basic assumptions about the regularity of events in the universe, the relativity of events in accord with a particular observer and frame of reference, and the configurational organization of fields in the temporal dimension of spaces.

The consequence of this new frame of reference for the theory under discussion has been a shift from observation of the external demands made on the organism to a focus on the subjective interpretations and meanings of these demands for the phenomenal self. The frame of reference also relies on pragmatic proof of the power of the theory to predict the individual's interpretations of reality, measured against the facts of external reality as determined by objective psychology. Prediction is thus seen as the single most important criterion of phenomenological psychology; however, prediction should be solidly based on theory utilizing provisional hypothetical constructs derived with the aid of known facts. The work of Snygg and Combs, as has been previously noted, also regards
the phenomenal self as an interrelated organization of such factors as body condition, level of aspiration, level of ability, interests, effects of emotion and tension, and self-concept, rather than a machine-like "universal" organism behaving as a result of single or aggregate minute external stimuli. Their theory, moreover, rejects such causal conceptions of behavior as those involving dual causation (the mind-body dichotomy), inherent properties of essence, the nervous system, and such symbolic constructs as "intervening variables," in favor of, respectively, single causation, field properties, the phenomenal field as causal, and hypothetical constructs. One of the objections stated by the two authors to causal symbolic constructs, and consequently, to apperception, is that causes not present must come from the past, thus requiring a detailed study of past behavior—a much too cumbersome and lengthy process for practical prediction. In the phenomenological theory, past and future come into the behaver's present action if they satisfy a need for the activity, for, from the behaver's point of view, the present is his entire universe.

Although the authors owe to Freud their basic conception of the conscious and the unconscious in the critical role they play in behavior, they have rejected the dualism implied by these constructs in favor of a "spectrum" or gradient of degrees of conscious awareness through which the individual oscillates in searching his experience (now bringing his interpretation of reality into sharp focus, now allowing it to lapse into subsidiary awareness) for purposes, details, and energy to resolve an immediate situation.
In consideration of the worth of the theory it should be noted that the authors have established a position which is not inconsistent with current findings in the psychology of behavior and which deals in a consistent manner with some of the perennial problems of psychology such as the mind-body duality, the concept of multiple causation, etc. Since the basic unit of behavior is actually the observer's interpretation of the subject's interpretation of reality, it would seem unlikely that any sort of reliable prediction could be made. It must be remembered, however, that all individuals have in common certain modes of interpreting experience since there are only a limited number of ways of experiencing reality. Furthermore, the techniques of observation provide for the assignment of provisional hypothetical constructs to be adjusted according to the degree of accuracy of the resultant prediction. Thus it would seem that the theory takes a truly realistic and pragmatic approach to the problem of prediction.

Some might object, furthermore, that the method for the derivation of principles from the postulates of the theory should be part of the system itself, not external to it; however, the authors have stated, outside the theory, that the derivation of principles from the theory can proceed only on the basis of the best checks science can provide at the moment and in keeping with the present incomplete state of knowledge. These checks are "feelings of subjective certainty," "the mental manipulation of ideas," "predictive power," and "internal consistency."
Although no special terminology is used in the theory, "need," the term used for the single inner energy source of behavior, would require a great deal more explanation than simply equating it with a basic drive for survival. This specification of a single drive in place of the many drives characteristic to S-R psychology is, however, one of the greatest appeals of the phenomenological theory. If Snygg and Combs had in mind Dewey's conception, however, "need" might be seen to be simply an awareness of dissatisfaction, of a perplexity, which the individual feels impelled to resolve by a desire for scientific coherence and aesthetic harmony. Furthermore, Snygg and Combs appear to envision a homeostatic, stimulus-reducing model of human behavior, a conception which differs from Dewey's "homeostatic-dynamic, stimulus-seeking" model (Dewey, 1957:285-289).

In choosing the term "phenomenological" to describe their approach to behavior, moreover, the authors run afoul of many differing connotations the term has acquired in the philosophies of Kant, Hegel, and Husserl, but it seems fairly clear that they intend to stress the molar, subjective, qualitative, functional, and situational aspects of the theory. In this sense, then, the phenomenological approach involves the descriptive analysis of the subjective processes of consciousness as observed in the act and insofar as it is possible to infer the contents of consciousness from the act in relation to external reality.

"Meanings," certainly a key term, is also largely undefined. Again, if its interpretation is to rely on a knowledge of Dewey, "meanings" would have to signify an existential perception of
relatedness and instrumentality of immediate events for the competent achievement of a present and finite goal or ideal, seen as the overcoming of an obstacle.

Having established the centrality of the self, including its phenomenological field, to the purposeful actions of men, it now becomes necessary to narrow the scope of the inquiry to the processes of linguistic activity, beginning with those of children.

**LANGUAGE LEARNING AND THE EMERGENCE OF PERSONAL MEANING**

Cognitive development is an important concept in the more epistemological than psychological inquiries of Piaget, Bruner, and Vygotsky. It refers to the transmutation of prior, lower-order and undifferentiated capacities into higher-order, specialized systems by which the individual participates in his world and understands it, adapts himself to his conception of the world, comes to recognize problems in the conception, and copes effectively with the dissatisfaction produced by the recognition of those problems. The transmutation occurs in relatively sudden concrescences of complex mental and motor operations as a consequence of the achievement of a certain competence in coping. In this schema the individual exhibits two significant modes of apprehending aspects of the world: as an undifferentiated whole which is useful for immediate practical ends, and as differentiated and partial, in which the parts appear related only in terms of remote ends. Polanyi (1958), who has used many of Piaget's constructs in formulating his theory of personal knowledge,
terms the first, "subsidiary, instrumental knowledge," the second, "focal, articulate knowledge." With cognitive development, the individual moves from a relatively narrow perceptual state in which external experience and self-awareness are scarcely distinguishable toward a state characterized by perceptual expansion and increasing differentiation between the self and the other. As maturation proceeds, however, finer distinctions are subsumed owing to operations of the law of diminishing returns, and the perceptual field subsides into a reorganized, reconstructed whole—a "new" homogeneity of experience (Piaget, 1954:350ff). Thus, both modes operate in cyclic, spiraling fashion toward fulfillment of an intelligent, expanded grasp of the world and competence in the manipulation of it promised by the very existence of the modes to begin with. In terms of the language process, which is but the elaboration of adequate representation and logical relationships through words, the child's linguistic development begins with the relatively flexible holophrase, then moves toward greater expansion and explication in accord with his socialization and cognitive development, and finally subsides into a reconstituted, personally meaningful, less flexible, verbally-keyed configuration of concepts which constitute the mature phenomenological field. On a smaller scale, each instance of communication follows essentially the same process.

The advent of language in the child, both a momentous and a mystifying event, signals the emergence of a distinctly human mind. It is a mind which, according to Vygotsky (1962), on one level cognizes its surroundings, attempts to assimilate and relate to them,
and transforms this experience into verbal thought which may find expression in directed behavior or communicative utterance, or both. And on another level, it is a mind turned inward on itself, autistic, whose perceptions arise primarily from feelings or emotional reactions, and whose thought, if it can be described as thought at all, is essentially nonverbal. Before any true knowledge of the nature of language can be grasped, cognitive activity must be understood, for knowing and thinking, being the concomitants of speech, are the sources of speech. And yet, paradoxically, neither can be truly understood apart from language, for all appear to be indissolubly interrelated, one giving form and content to the other. What is ordinarily termed thinking, Polanyi appears to say, is the act of bringing to focal awareness a content of one's phenomenological field or world-view in response to a special situation, while knowing (personal knowledge) is a special case of the former, an ineffable and subsidiary apprehension of externals guided by a solid conviction of truth (Polanyi, 1958:88).

What follows immediately is a general indication of what some of the problems are in understanding the child's early language development from preverbal speech through the appearance of the first word combinations. Thus, the discussion will begin with a synthesis of the views of Church, Piaget, and Vygotsky, and the anthropological philosophy of Langer, in which the study of the higher primates and primitive man is seen to provide observations of significance to the understanding of the preverbal experience of the child. It should be noted here that whereas Church and Piaget both see cognition studies as the essential key to the understanding of language, Vygotsky affirms that it is language which,
after a certain degree of early cognitive development, is the primary shaper of man's view of the world. This view is also held by Whorf.

Because it seems evident that the views mentioned above are not mutually exclusive, they would thus present a probably truer view when examined together. An ensuing section undertakes such an examination.

There then follows a survey of several psycholinguistic studies by such authorities as Brown, Bellugi, and Weir, which trace the acquisition of grammar and syntax in the child's language growth. What is presented is evidence of the specific functions, concretized in language, which reveal significant and puzzling developments in the child's cognitive structuring of his knowledge and in the operation of his thought processes.

The discussion concludes by suggesting, in a brief fashion, certain learning factors which appear in the studies mentioned above which seem to have implications for teachers of language and reading.

Early Symbolic Transformations of Experience

According to Church (1961:4ff.), the infant perceives a kind of reality surrounding him which would be almost totally unfamiliar to an adult. His perception is, at the beginning, of an undifferentiated, amorphous, and meaningless environment. His point of view in this environment is controverted (to avoid Piaget's term "egocentric" which seems to have caused some confusion), that is, all perception
of the world is colored by the child's particular manner of viewing external objects. Even the child's awareness of self is limited for he is not aware that he has a point of view or that he is experiencing. His total experience, furthermore, is not clearly differentiated into inner and outer; hence he develops a characteristic manner of approaching his world--he notices, he imitates, and he participates. Let us examine these functions.

The child notices a single object, act, or person and his attention is fixed on it--it imprints itself. Since he does not distinguish between self, which is amorphous, and the other, he is given to regard externals as more "real." Gesell (1960:4) describes the act of noticing as perceptual--the visual coupled with the mental:

The baby first grasps the world with his eyes, then with his hands. The seeing eye is a reaching, groping, grasping organ--a teleceptive prehensory apparatus. In league with the growing brain it manipulates visible objects, cues and symbols.

Langer (1951) describes the act as presentational--an act of "signification" wherein the mind is suddenly flooded with an awareness of the object as a whole. It is evident that the presentational approach to the external world is nonlogical, whereas later, with the advent of logic, the child is able to perceive spatial relationships and qualities, for instance, and thus sees discursively, that is, rationally as opposed to intuitively.

The child's repeated handling of objects, visually, then manually, contributes to the growth of the "meaning" of the object, although it is not yet formulated into thought. He reacts to the object, first by noticing, then by simulating certain responses to the
object. He internalizes these reactions. The child later abridges these "simulacral reconstitutions" of his earlier behavior and uses a type of shorthand in responding—a schematic imitation and representation in which his responses are reduced to signs for the object. For example, instead of bouncing up and down with his whole body when he sees a ball, he may now bob his head two times. This phenomenon, the reduction of an imitated behavior, appears later in the child's production of one- and two-word sentences.

The child's undifferentiated perception of reality permits him to believe that the object, person, or event he has noticed, reacted to, or internalized, is part of himself. He identifies and empathizes much as a person watching another carry out a skillful task will mentally and emotionally go through each step of the task while holding his breath and "helping" with bodily motions. The child confuses the wish and the deed itself, hence he bobs his head, in the example above, not only as an act of recognition of the properties of the ball but also with the expectation that the ball will repeat its original motion, an essentially animistic point of view.

All three of these characteristic modes of infant behavior and ways of viewing the world describe the most notable feature of children's early thinking: it involves internalized behavior. It should also be noted that adolescents and adults lose none of these particularities. They are simply submerged or assimilated into later cognitive structures.
From Presentational to Representational Contemplative Meanings

Gradually, the child's internalized experience of external objects, persons, and events becomes organized into general perceptions about the regularities in the environment and about his own body. According to Church (1961:36), his basic knowledge is organized into schema which reflect the environmental and bodily properties to which he has become sensitive. Yet two ways of perceiving continue to coexist within him: the participational, in which he "responds organismically in an unmeditated, reflex-like way to the dynamic, affective, physiognomic properties of the environment" (Church, 1961:49), and the contemplative, "where action is suspended in favor of inspection, judgment, and analysis." And these two levels of perception are the springs of two distinct modes of thought which in turn give rise to so-called "egocentric" speech and communicative or discursive speech.

In the early stages of growth the first step toward communicative speech is noticed in the child's gradual differentiation in his cry between anger and distress. Further refinements communicate more subtle meanings to the parents as the child moves from the purely symptomatic toward the expressive and communicative. The child's early social play with his parents also includes conversation-like babbling and gurgling sounds which reveal an internalized basic awareness of the linguistic mode of behavior. During the second half of his first year the child begins to indicate actions he wants performed for him through the medium of concrete enactment, that is,
when he wishes to be held, he holds out his arms. Gestures come to play an even greater role in communicating with his parents. When signifying a desired object the child makes a reaching gesture; however, the parent must guess from the accompanying shrieks or satisfied grunts whether he is bringing the correct object. As the child becomes able to toddle, he may begin using objects as tokens of his wishes: when he brings his coat he signifies he wants to go out, or when he brings a phonograph record he indicates he wants to listen to it.

None of these behaviors, however, is restricted to man—a chimpanze or an orangutan may be similarly trained as evidenced in the studies of Kellog and Kellog (1933). The pre-linguistic thought of children seems to occur in a manner quite similar to that of the higher mammals, for the similarities in the use of tools by children and apes seem to reveal almost identical embryonic intellectual thought processes. But here the similarity ceases. The chimpanze's "linguistic communication" remains fixed at the affective level, one which consists of expressions of social emotions, greetings, facial play, and rough gestures, which depend entirely on the presence of the object—the immediate spatial-temporal image—to which its communication refers. Unlike the chimpanze, as Langer observes (1951: 119), the child goes on to make intentional and conscious attempts to inform and influence others. Two steps in the direction of deliberate speech are (1) to refer to an object, person, or event not immediately present via representational behavior of the kind examined earlier, and (2) to change the grasping, reaching gesture to a
pointing one. Pointing incorporates the predictive and the indicative aspects of language—"Want that." Both establish the deliberate use of signs to signify a person or thing as a means of commanding action. It thus appears that, while the child has not yet produced recognizable speech, he has been learning the language just the same, even though he has received no specific training nor specific rewards. Evidence of this passive language is seen in the child's early understanding of verbal cues: "Where's the block?" A child of ten to twelve months goes to it, picks it up. "Give it to Daddy." The child brings the block to his father. He understands what the person using the words means, but very little else, for the names of things have as yet little objective reality for him as compared with the visually and tactiley accessible objects of his environment. The very fact that the child understands, however, apparently means that he has begun to acquire a limited vocabulary. The process of vocabulary building can be seen as the child points to an object and makes an interrogatory sound, is told its name, and goes on to point to something else (Church, 1961:61). From this it is evident that he also learns the adult intonational patterns. This too is foreshadowed by the almost understandable "conversations" the child carries on in streams of gibberish which reflect adult intonation. This entire manner of behavior of the preverbal child is essentially the linguistic mode which is prior to any particular symbolic acts.

The first appearance of oral language takes the form of the holophrase—the one-word utterance which constitutes an early sentence. It consists of such interjections as "bye," "hi," and "no,"
denominations or names of familiar objects and persons, and commands. The most important of these to the young child is the name, for the child's early vocabulary is made up largely of nouns, although it also contains some verbs, adjectives, and adverbs. The discovery that things have names, according to both Vygotsky and Langer, appears to be both a presentational and a participational act for it is charged with great emotion and excitement. It also marks the coming together of the two principal lines of development: passive speech and pre-verbal thought.

The child's early use of words reveals an ambiguity of meaning. Part of this is owing to the fact that most of his early vocabulary is picked up from words heard in a particular context. Other factors which may contribute to this are: (1) the inability of the child to take the role of another person and thus make a real effort to adapt his speech in order that another can understand him, Flavell (1963:155); or, (2) as Vygotsky (1962:50), points out:

The data on children's language (supported by anthropological data) suggest that for a long time the word is to a child a property, rather than the symbol, of the object; that the child grasps the external structure word-object earlier than the inner symbolic structure.

and (3) the child's attempt to compress a world of meaning and intention into the words in his comparatively meager vocabulary.

The child's next step is to combine words into utterances which are largely predicative statements. He will juxtapose certain words in an attempt to narrate and describe his experience. This denotative function, which in the early stages is understood only by parents and siblings who know the context, is indicative of the
child's growth toward socialization and communication. Further examination of these two-word "sentences" is taken up in the discussion of the studies of Brown and Weir.

Important to the schema of the language process is the fact that, according to Church (1961:81-82), studies have shown that the child produces "global" words from the very start: he appears to take from his passive vocabulary of speech and spontaneously produce a complete, preformed utterance. Chomsky (1964:35-39) agrees that comprehension competence appears in advance of production competence. The Brown and Berko study (1960:1-13) seems to indicate that the child has the entire phonetic representation of a word in his mind before he utters it, but owing to an inability to reproduce the phonetic contrast he has heard, he may mispronounce it, saying "fis" for "fish," for he will attempt to correct the adult's deliberate mispronunciation of "fis." Hence, it is possible to conclude that the child's acquisition of language must be accounted for by more than simple imitation of the adult model. The concept of passive language would seem to be part of this other factor. One must be able to "hear" the sound schema of the language. One hears only the quality of an unfamilar tongue, not its phonemes, hence he does not really "hear" it nor is he able to reproduce it at the start.

Other factors of significance to the schema are the facts that (1) reinforcement appears to affect children's speech only after the word or name has been learned in passive speech, (2) speaking to a listener is evidently not a necessary factor in producing feedback and increasing reinforcement as indicated by Weir's study, and
(3) the effect of reward on a child's speech is more psychological than behavioral (Church, 1961:86). Language growth is not discontinuous, but certain features of the child's language indicate different levels of assimilation and accommodation. An instance of this is found when the child moves from egocentric speech to communicative speech, although it is to be understood that this egocentric, intuitive-level speech never disappears but renews itself in the mythic and aesthetic aspects of man. The child has decentered; he has begun to compare one mode of behavior with other possible modes, and thus is more successful at taking the other person's viewpoint and communicating with him. This stage, which Piaget terms the stage of concrete operations, supercedes the earlier stage in which the child, lacking the structure by which to assimilate and adapt to the world, committed "systematic errors" such as that of the participational view and of illusions resulting from cognitive egocentrism. Flavell (1963:415) describes the more recent stage thus:

The world is beginning to stand still and stay put, a world which like the child himself, knows something of law and order, and above all a world in which thought really counts for something, in which thought can be a more trustworthy guide to action than perception.

Another significant insight is related to the nature of the symbolic function in the child. The product of noticing, as has been remarked, is the "imprinting" of the totality of the object including its properties on the child's mind. This imprinting is both a response and an image-signifier, which long before language is expressed externally, constitutes private symbols and social signs. It is this nascent symbolic function, together with its
constellations of private symbols and social signs, which makes possible the emergence of language for the child. After language arrives, however, language itself becomes the vehicle of symbolization without which "thought could never become really socialized and thereby logical". (Flavell, 1963:155).

The problem regarding the translation of passive speech into phonetic speech is one which continues to trouble workers in the area of psycholinguistics. Vygotsky has suggested that egocentric thought and speech, which are autistic, non-verbal and charged with sensuous and semantic meanings, are transformed through inner speech and thought--thinking in words--before appearing as socialized speech. Inner speech, Vygotsky believes, is a fairly late development arising from the socialization of the individual. This inner speech is logical although its syntax is scarcely formed. The process of phonetic speech involves a constant mental shift from thought, wherein lies the motive and the meaning of the speech, to inner speech where it acquires the proper symbolic form, is made logical and socialized, and finally to phonetic speech where the utterance is pronounced according to the model and cast into the proper syntax which will express the original intent. The communication, Vygotsky indicates, is clear only when we understand the person's motives, for meaning is elucidated, in the mature mind at least, by the continual movement back and forth from thought to word and from word to thought. Meanings are dynamic formations: they change as the child develops; they change also with the various ways thought functions. Vygotsky's
concepts of inner speech and meaning will be treated in further
detail in a later section.

The power of the word to shape and give meaning to experience
and thought has concerned most writers who have dealt with the subject
of language. The child learns this at a relatively early stage as
evidenced by his demand for the names of things. Brown in
Bruner et al., A Study of Thinking (1962:304), discusses the
linguistic-relativism of such anthropologists and linguists as Whorf,
Sapir, Lee and Hoijer:

The world can be structured in many ways, and the language
we learn as children directs the formation of our particular
structure. Language is not a cloak following the contours of
thought. Languages are molds into which infant minds are
poured. This view departs from the commonsense notion by a.
holding that the world is differently experienced and conceived
in different linguistic communities, and b. suggesting that
language is causally related to these psychological differences.

And Langer, writing about Helen Keller's dramatically recorded
discovery that things had names, that the word had the power to denote,
indicates that the power of the word is derived from its ability to
both represent, that is, to enable one to symbolize, store up, and
re-order experience, and to assist the process of thought through the
formation of concepts, categories, and theories.

Having thus briefly explored many of the significant factors
involved in the understanding of the child's early speech processes,
it is possible to turn to certain specific studies in this linguistic
development.
Concrescences in Linguistic Competence

A discussion of the problems of syntax indicates that word order often carries fully as much or more meaning than do words themselves, for classroom observation has shown that words used in unfamiliar syntactic patterns become meaningless to many pupils. We note here that the child's understanding of morphology, that is, the significance of relationships between units of meaning such as words, bases, prefixes and affixes, and inflectional endings, increases with age and is reflected in his own production. These productions, which evolve from "store" at eighteen months, to "go store," to "wan' go store," to "I wannagg'zdore" at six years, reveal that the child does not perceive language in terms of individual words but as syntactic combinations. A study by Amsden (1963) of the speech development of multilingual youngsters, using the principles of generative grammar, uncovered three levels of "perception." One group considered correct certain sentences from which a function word was absent, while another was able to correct the sentence but could not say what they had done, and the third was able both to correct the sentence and point out the omission. No relationship was found between syntactic development and intelligence, but it was felt that language development was linked to the child's growing personality structure, reflecting adjustment to the world. This observation happily concurs with and supports Piaget's view, discussed above, which describes the development of the child occurring as a continuous process of reorganization in which the reaching out for new experience is, at least in part, dependent on what has gone before. In the case
of the polyglot children it was observed that they made errors attributable to three factors: (1) in transferring the pattern of one language to another, (2) in having weak concepts of syntax in both languages, and/or (3) in having learned the observable erratic syntactic behavior of adults. It was suggested, however, that the precise exchange of thought is not possible without precise syntax and conversely, that precise syntax is not possible without precise thought—a view which would be supported by Vygotsky, Piaget, and Whorf.

Of major interest to our considerations here is the work of Brown and Bellugi (1964:133-151), in a study conducted with two culturally rich children. It should be noted that the effects of high intelligence may have been reflected in the findings. Tape recordings were made of the children's speech in their own homes with the participation of the mothers who interacted with their children. The object was to record as much as possible of the child's production in a natural setting for later syntactical analysis. The analysis was based on a transcription of the utterances into adult speech equivalents. It was noted that the first appearance of two-word utterances came at about 18 months. The three major processes in syntactic development were termed "Imitation and Reduction," "Imitation with Expansion," and "Induction of Latent Structure." In the first process, a constraint on the length of the child's imitation of his mother's speech was observed, that is, while the imitation of "Wait a minute" was repeated without change, "It's not the same dog as Pepper" was reduced to "Dog Pepper." It was also
noted that the children's own constructions, i.e., "Throw Daddy" (which the mother translated as "Throw it to Daddy") and "Put truck window" ("Put the truck in the window"), were likewise abbreviated to a telegraphic style. The authors have suggested that the child knows enough "passive" language to retain the content words and stress forms while omitting the irrelevant (to him) function words.

In the second process, it was noted that the adult tended to expand the child's productions into a more grammatical form yet retained his own word order: the child said, "Pick glove" and the mother responded, "Pick the glove up." The authors point out (1964: 143) that this is one probable manner in which the child learns syntactic meanings. The authors put it thus:

By adding something to the words the child has just produced one confirms his response insofar as it is appropriate. In addition, one takes him somewhat beyond that response but not greatly beyond it. One encodes additional meanings at a moment when he is most likely to be attending to the cues that teach that meaning.

The third process, "Induction of the Latent Structure," is seen by the authors as the method by which the child progressively differentiates the specific privileges of occurrence of word classes. The child's own constructions, "Why it can't turn off?" "Cowboy did fighting me," "A this truck," reveal mistakes which externalize the child's search for the regularities of English syntax. The core phrase for the child is the noun-phrase, "dirty knees," "that Adam," "my mommy," which exists as a total independent utterance. The grammar of this type of sentence at this time indicates that certain words (articles, possessive pronouns, numbers, demonstrative
adjectives, etc.) can function as one class because they have the privilege of occurring before nouns. Some sixteen weeks later the child has progressively differentiated certain demonstrative pronouns and certain articles which have the privilege of occurrence, in that order, before the larger class of modifiers and nouns. The child is thus able to say, "This is a pretty dress" and sentences like it with proper regularity. Somewhat later, the child demonstrates the differentiation of the larger class of nouns into special usages for proper nouns and certain usages for count nouns. Before long the noun is replaced by "it", the advent of which becomes clear in the following sequence: "Fix a tricycle," "Fix it a tricycle," "Fix it."

The authors' conclusions are of special significance here for they support the view that the language process, at least in the case of children with high intelligence, is a continuous construction and reconstruction of experience for which no learning theory seems to account. Brown and Bellugi (1964:151), put it thus:

It looks as if this last process will put a serious strain on any learning theory thus far conceived by psychology. The very intricate simultaneous differentiation and integration which constitute the evolution of the noun phrase is more reminiscent of the biological development of an embryo than it is of the acquisition of a conditional reflex.

Brown and Fraser (1964) conducted a study in many respects similar to the preceding one, with the only difference that there were thirteen subjects. The object was to collect as large a corpus of two-word or larger imitated or constructed utterances from children ranging from 24 to 36 months. Their hypothesis, somewhat substantiated by the Brown and Bellugi studies, was that the child
has his own construction rules: that in committing systematic errors in regularizing irregular inflectional endings he is learning grammar through the type of substitution drill used in foreign language teaching; that systematic errors arise from the child's finding syntactically equivalent forms that are not so for the adult; and that through the acquisition of grammar, the child learns to organize words into syntactic classes. Brown and Fraser (1964:47) say that:

If a child has learned to organize words into such classes, to enter them on mental lists of syntactic equivalents, he will have a very powerful means of getting beyond his corpus.

A further object of the study was to infer a grammar (1964:49), from the children's production on the basis that:

Rules of grammar are cultural norms; like other norms they are descriptive of certain regularities of behavior within a community, and they are also prescriptive in recommending this behavior to new members of the community.

The investigators gathered 500 different utterances from each child and set about analyzing the reductions which were observed when the children's utterances were compared with adult equivalents. It was thought that the investigators' procedure would parallel the model of the child's learning, for as the child appeared to have induced his grammar from the adult model, the investigators could, likewise, induce a probable "generative mechanism" from the obtained utterances.

The results of the study showed that the youngest children seemed to use their few words for "global" communication and their structures in limited ways, whereas the older children used words and structures in more clear, differentiated, and general ways.
Although many children's sentences did not reflect the grammar of the adult, by the age of three most of the children's simple sentences were found to correspond with the English sentences for which generative grammar had been set down by Chomsky. The age-related increase in mean length of utterance which tripled between the ages of two and three, was found to hold true for the number of morphemes in a given utterance. Forms of the verb "to be" in the progressive tense and the modal auxiliaries "will" and "can" appeared at about 30 months, whereas it was most interesting to note that the younger children consistently reduced their utterances by omitting the progressive of "be," "will," and "can" in their imitations of adult utterances. There was a consistent tendency to retain one kind of morpheme and drop another. Those most likely to be retained were the morphemes which occurred in the final phrase position: reference-making forms, expandable nouns, verbs, and adjectives, intonationally relatively unpredictable from the context. Brown and Fraser (1964:78) concluded that:

It is quite possible that the child reduces first, then forms inductive generalizations, and makes new utterances on the model of his reductions.

It seems evident from this that the child does indeed systematically reduce adult speech by omitting words which carry little information, and from this corpus of abbreviated sentences, induces general rules to govern the construction of new sentences.

In her *Language in the Crib* (1962), Weir has presented an unusual study of the pre-sleep monologues of a two-and-a-half year old, alone in his crib, talking to himself and his toys.
The data of the study is basically a series of tape recordings made of Anthony, Weir's son, as he chatted with himself in the darkness and isolation of his room for a few minutes before falling asleep. Unlike the previous studies, however, the transcription of the speech has been made phonetically, a truly valuable feature of the study, for in the previous studies the accuracy of the transcription of what the child actually said can be called to question. The speech of Anthony has been thoroughly analyzed: the phonology glides, phonemic fluctuations of vowels, and three-consonant clusters; the grammar-morphology, inflection and derivation; the syntax, the phrases, the sentences, and the paragraphs of his utterances have been minutely examined. Two significant features were the overwhelming majority of imperative phrases and the marked reduction of his lexical vocabulary when compared with his daytime speech.

A portion of a typical paragraph will serve as an example for the discussion which follows:

I take the white blanket off
On the blanket
Under the blanket
Sleep go
What a blue blanket
What the take the blanket

The pre-sleep monologues include phrases heard during the day, but more particularly, are the constructions the child makes apparently in an effort to try out various combinations. His grammatical transformations and reconstructions do not always meet with success, as evidenced by the last line of the sample. He drills himself on
substitutions ("on" "under") much as the foreign language student does. He drills on consonant clusters. He corrects his own pronunciation: ("Aplz," "Epls" for "apples"). He produces successive minimal pairs of vowel phonemes: "left-left," and builds up utterances out of their constituent sounds. The quality of production of the "practice sets" eliminates the accidental element. It thus appears that Anthony has been engaging in an unconscious yet self-directed language learning process. It seems obvious that he has grouped certain classes of words in his mind which he practices by putting different "movables" into the "slots" following the pivot phrase:

Anthony take the
Take the book
Call up mommy
Call up mommy's all gone
All gone

What color
What color blanket
What color mop
What color glass

The study has several merits aside from technical ones. It is one of the very few in the area of children's pre-sleep monologues. It corroborates, moreover, the data of the studies discussed in this section, although the children in these were actively engaged exchanging impressions with other people in social situations. G. A. Miller, in the foreword, indicates that a social aspect of Anthony's language production would tend to discount the validity of stimulus-response and association learning theory in their application to language learning. Miller also raises two questions which proceed from the current study: "How can we discover what a child knows about his language?" and "What are the most sensitive indicators of
linguistic competence that we can devise?" In answer to the first it
would have to be said that the child is apparently not conscious of
knowing anything about his language but knows everything of his
language; hence his subsidiary knowledge may only be induced from
such careful analyses as Brown and Fraser's and Weir's. To the
second, it would have to be answered that Loban (1963) has devised
what appears to be an extremely carefully designed and thorough
indicator for his study of the language of elementary school children.

Roman Jakobson's foreword takes up a different aspect of the
Weir report. Whereas Vygotsky concluded that egocentric speech of
children performed a mediating function between inner speech and
overt speech, and that overt speech was internalized psychologically
prior to its physical internalization, the Weir study appears to have
recorded the gradual transition from external to inner speech through
these centroverted solitary monologues. Jakobson suggests that these
soliloquies provide insight into the speech of dreams—a verbal
behavior which should be studied to provide an understanding of the
child's mental life. It can be suggested here that this view of
Weir's study, when taken in context with the preceding investigations,
may account in part for the "telegraphic" quality and the nonsyntactic
verbal "shorthand." Thus the child may at times utter his inner
speech without the mediation (and socialization) of his egocentric
speech. Jakobson also observes that Anthony's speech reveals the
intermingling of the "metalingual," that is, the communicative
culturally-related linguistic factors, and the volitional, and the
mythicopoetic aspects of speech, which in adults were quite different
functions.
The Deduction of Meaning and the Inductive Learning of Performances

From the various studies examined and from the cognitive theories discussed it seems evident that language development is a complex process. That the speech of adults casts little light on the nature of the language process, and that it cannot be used as a criterion for the analysis of children's speech, strongly suggests that the learning of language should be regarded from a genetic-historical standpoint with adult speech as the end development of a particular type of function. By regarding the language process as a continuum of gradually evolving mental and linguistic experiences, each based on the ones preceding, as Vygotsky, Piaget, and Brown have suggested, it might be possible to construct a conceptual teaching model within which were provided: (1) an enriched learning environment which approximated the context and the loving personal relationship of the home, (2) a breadth and depth of (not necessarily sequential) language experience deemed requisite to the development and natural evolution of certain language skills, and (3) a teacher with a thorough understanding of this language process.

One among many of the problems which arise from the study of the child's preverbal and early language development is the matter of meaning. The child somehow sooner or later acquires the meaning of a word in the process of learning his language. While the studies discussed here have primarily limited their investigations to the acquisition of words and word combinations, the advent of syntactic order presupposes that the child has also learned how to use the word which in turn indicates that he knows what it means. From the
discoveries of Vygotsky, and from the evidence of the changing usage of words by children, it appears that meanings are not stable. They change according to the breadth and depth of the child's experience. As it has been stated earlier, the younger child makes a word perform a global communicative function, while the older child will demonstrate at the same time more discriminate uses and a more generalized idea of the literal, figurative, and expressive manners in which a word can function. Osgood (1961: 91-106), in commenting on a paper by W. A. Bousfield, declares that meaning is the single most important variable in human learning, verbal or otherwise; and that:

... human adjustment in mainly a matter of acquiring and modifying the significance of signs and learning how to behave in ways appropriate to these significances.

A derivative question with implications for teaching is how words acquire this meaningful and significative or symbolic character for the child. One of the most notable features about the way a child learns is that, since he lacks the formal structures of conceptualization yet to come, it is quite different from that of an adult. Children are constantly trying to relate the abstractions of the adult world (which have very little relevance the child's world) to the concrete experiences of their own. They usually fail to relate because each is operating under a different mode. The mature adult perceives reality through a medial system of language, classes, concepts, signs, and symbols, whereas the very young child's view is at once ungeneralized, discrete, and participational. At best, the world which education introduces to the child is represented by proxy.
While adults frequently resort to nonverbal analogic language when words fail, the child for whom words are still dubious means of communication needs as much nonverbal help as possible in determining meanings and in shaping his relationships to and perception of the world. That the symbolic process has been formed is indicated by the degree of socialization or, negatively, of autism evidenced in the child's use of language. Fearin g (1962:81) has elaborated on this:

One must make assumptions about the needs or motives of those whose behavior he is trying to steer. In this commonality of response lies its "meaning". Without this sharing process through mediation of the special kind of stimuli called signs or symbols there is no communication and no socialized meaning.

He observed further that symbols function by: (1) pointing to or placing in context, (2) generalizing the referent by placing it in a category of objects or acts towards which one has an attitude, (3) referring beyond themselves as surrogates, (4) expressing affectively-toned attitudes towards situations, etc., and (5) enabling individuals to share experiences and to participate in each other's attitudes and motives--thus to understand each other's intents and meanings.

A l m y, (1964:101-102), sums up the implications for the learning and teaching processes when she writes:

Piaget's theory further implies the necessity that the child discover his own errors in thinking in such a fashion that he, himself, attempts to correct them. The adult cannot think for the child nor can he impose adult answers on him. Rather he paces the child's understanding with increasingly varied and complex problems so that the child becomes aware of his own error, rearranges his information, and moves gradually to a new synthesis.

In view of the foregoing discussion of early verbal behavior, especially in its reiteration of the observation that children learn
to speak by systematically reducing adult phrases, begin overt speech with holophrases, and later go on to generate and systematically expand these, it will be useful to turn to an examination of the "mechanisms" which Vygotsky has suggested operate in this generation and expansion of speech.

MEANING AND THE REFLEXIVE CHARACTER OF THINKING, SPEAKING, AND LISTENING

Dewey and Mead were among the first philosophers to propose the then novel conception that language makes reflective thinking possible. As Dewey expressed it, (1929:141), "If we had not talked with others and they with us, we should never talk to and with ourselves." For him, social communication was not the outcome of inner speech or soliloquy; on the contrary, soliloquy was the result of dialogue with other persons. Thinking, therefore, was never wholly private but was a personal version of social discourse.

The significance of an utterance for the person speaking as well as for the listener is, under ordinary circumstances, inaccessible to experimentation. Vygotsky and his associates (1962), however, were led to the conclusion that egocentric speech as described by Piaget was a stage of development preceding inner speech but which partook of many of the functions and structures of inner speech. Since the egocentric speech of the child was accessible to experimentation, they could, by inference, discover the key to the study of inner speech. Vygotsky agreed with Piaget that language has two modes or planes; what Piaget had termed originally communicative
language and an ineffable, introverted language of symbols, images and dreams. These became for Vygotsky inner speech (the meaningful, semantic aspect) and external or phonetic speech. The lines of genetic and historical growth for each plane of language he saw as following different, essentially opposite, directions: one he labeled the preintellectual stage of speech; the other, the intellectual. In inner speech the individual's thought begins with a whole—a one-word sentence—and develops toward the particular—the parts of a complete sentence; while, in external speech, the individual's thought grows from the part—a word—and moves toward the whole—the sentence as a unit of meaning. Vygotsky contended that his earlier studies on cognition and concept formation revealed two distinct modes of thought as well, springing from different roots and developing along different lines. The youth's social and cultural growth and intellectual development take him gradually from a direct, unmediated awareness of things or events, to a perception of likenesses between things and events mediated, guided by, and expressed in words. This mediated form of focal awareness is what Vygotsky referred to as perception in terms of meaning. In the former mode of participational immediacy, thinking occurs in terms of complexes, where individual objects and events are united in the youth's mind not only by his subjective impressions but also by bonds actually seen as existing between them. These bonds appear to be concrete and factual rather than abstract and logical. The awareness of differences comes even later. Thus, the two modes of thought might be labeled "prelinguistic" and postlinguistic." The postlinguistic phase
coincides with the intellectual stage of speech and is the genesis of concept formation. In inner speech, Vygotsky has said, the distinct modes of thought and speech come together, and thought becomes verbal while speech becomes rational. Concept formation in its true sense, then, develops only after a somewhat lengthy developmental process involving language acquisition, acculturation, socialization and education, between the embryonic and the fully formed stage of mental processes which emerge at puberty. At this point, in adolescence, inner speech becomes possible and egocentric speech, a prior non-intellectual and non-social stage, is subsumed. While external speech is speech for others, inner speech is speech for oneself, developed through a mastery of the social means of thought--language. This requires the mastery of the syntax of thought, that is, of logic, and the mastery of the inner symbolic structure of words. Thus grammar develops before logic; external word-object structures of words (seen as properties) are grasped before symbols. Inner speech must be learned by practice. It is much like a youngster learning to add: he begins by mimicking and counting out loud, in rote fashion, or using his fingers. Later he learns to add in his head, using logical memory. Likewise, he learns to think using words "uttered" silently in his head, recombined until thought takes shape. Inner speech is in essence the outcome of developmental processes involving accommodation to the world, a gradual differentiation of its contents and purposes, the internalization of external dialogues, and the assimilation of complex aspects of the environment: primarily, symbolic knowledge, the manipulability of persons, things and symbols,
and the increasing awareness of other selves. With practice, by the time the stage of formal operations is reached, the individual has fully developed the capacity for inner speech as a mechanism by which wordless intents and responses are shaped into verbal thoughts and are matched with verbal meanings, prior to their utterance. He is well on the way to maturity. Where before his attention was on the content of thought, his attention is now on the process of thought itself.

The arrival of inner speech marks the psychological decentering of the individual and the developmental endpoint of the function of centroversion or egocentricity. True awareness and control appear in the youth—at first limited to the results of actions and later extending to the "how" of actions, i.e., the operation itself. Decentering, comparing one action with other possible actions and taking the other person's viewpoint, leads to an awareness of how things really are. Piaget's concept of decentering, it can be seen, bears a striking resemblance to Mead's concept of taking the role of the other. Inner speech, since it is speech for oneself, is a type of shorthand used among people who know each other so well that they "telegraph" their thoughts. It drops outward syntax and subject, relying entirely on predication. It appears disconnected and incomplete, and deals preponderantly with sense over (logical) meaning. It is an inner monologue almost without words, each word semantically charged—a kind of thought in pure meanings. Vygotsky (1962:148) adds:

In inner speech . . . a single word is so saturated with sense (and private meanings) that many words would be required to explain it in external speech.
But like Dewey and Whorf, Vygotsky also recognized that thought is engendered and shaped by speech. Thus one cannot truly say that thought is the elemental source of language: linguistic transaction is also the spring of thought. Thought has its own structure, its own syntax, hence the transition from one to the other is extremely difficult. Speech to an extent distorts and masks our thoughts; however, the actual transition between thought and word is through meaning. Speech, the implicit response to other selves made explicit, is engendered by an affective-volitional tendency—a motive, a desire—toward transaction with the environment. This tendency should be regarded as an innate human capacity, perhaps grounded in both biological and socio-cultural factors. Hence, to understand the central meaning of what another person speaks, one must understand his motives. The signification meaning of words, that is, the relation between the thing-signifying, the thing-signified, and the person having ideas, is for Vygotsky a dynamic formation. These meanings change both as a child develops and with the various ways thought may function. Vygotsky (1962:73-74) suggests as corroboration of this statement the history of a word in any language; its meanings change just as in a child's thinking:

Russian has a term for day-and-night, the word sutki. Originally, it meant a seam, the junction of two pieces of cloth, something woven together; then it was used for any junction, e.g. of two walls of a house, and hence a corner; it began to be used metaphorically for twilight, "where day and night meet"; then it came to mean the time from one twilight to the next, i.e., the 24-hour sutki of the present. Such diverse things as a seam, a corner, twilight, and 24 hours are drawn into one complex in the course of the development of a word, in the same way as a child incorporated different things into a group on the basis of concrete imagery.
The relation of thought to word to the listener, in the mature mind, is a process, a continual movement to and fro, from thought to word to person and back. During this process, the relation of thought to word undergoes a change which produces meaning. Thought is not merely expressed in words; it comes into existence through them. It is also this constant mental shift between word and thought which makes possible, as Jerome Bruner puts it in his "Introduction" to Vygotsky's book, "man's capacity to create higher order cognitive structures that, in effect, replace and give new power to the conceptual structures that one climbed over enroute to higher order mastery".

As noted earlier, through studies of egocentric speech Vygotsky hoped to arrive at an experimental description of his construct of inner speech. This conception, he hoped, would clarify meaning and the whole inward aspect of language, the side turned toward the person. As it appears, then, thought and language are infinitely complex processes, dynamic in nature, constantly interacting and interpenetrating each other, and as fluid as human character. But one aspect of inner speech stands out which is helpful to a conception of meaning. It is that speech is at times metaphorical, at times logical, for these two modes partake of their genetic origins which are never entirely subsumed. Metaphoric language is primarily inner speech externalized as the speaker looks inward; logical or scientific language is primarily inner speech externalized as the speaker looks outward. The first is characterized by semantic compression attached to a word or holophrase made to
function symbolically by representing a microcosm of human consciousness. The second is characterized by orderly and lawful expansion of an original predication to which modification is added to clarify and to bring to completion an ordinated series of parts. While the first attempts to achieve universality of meaning at the expense of clarity, the second attempts particularity of meaning at the expense of universality. The first expresses; the second communicates. Communication is thus seen to be a function of awareness and understanding of others, whereas expression is a function of an understanding of self.

It is significant to note that Chomsky (1957:92), while working within an entirely different tradition of linguistic and philosophical analysis, appears to have arrived at essentially the same conclusions as Vygotsky. His concern with the generative and syntactic aspects of language have led him to believe that whole utterances spring from "kernel sentences" or basic phrases in which the intent of the speaker is bound up in a few key words almost transcending them. They are in this sense metaphoric, almost telegraphic, barely articulate, and unexpanded:

In particular, in order to understand a sentence it is necessary to know the kernel sentences from which it originates (more precisely, the terminal strings underlying these kernel sentences) and the phrase structure of each of these elementary components, as well as the transformational history of development of the given sentence from these kernel sentences. The general problem of analyzing the process of 'understanding' is thus reduced, in a sense, to the problem of explaining how kernel sentences are understood, these being considered the basic "content elements" from which the usual, more complex sentences of real life are formed by the transformational development.
For Chomsky the terminal strings and phrase structures consist of the underlying principles of ordination and subordination governing the relations between what is predicated and its modification, that is, the immediate constituents of the sentence. The concept of the kernel sentences, regarded as a hypothetical construct, thus appears to be in many ways a direct relation to or descendant from Vygotsky's concept of inner speech. The further significance of this for the problem of meaning will be taken up in the next chapter.

This chapter has focused on the distinctive capacities and processes upon which man relies for seeking and organizing knowledge, the ultimate purpose of which is a personally meaningful world-view through which man may labor toward the mastery of his environment with relative competence. The capacity for symbolically abstracting experience has made it possible for him to generate language, to regard himself as an object, to take the role of the other, and to represent and express reality. These in turn have provided him with the means of moving away from habitually fixed ways of thinking and acting, and from a participational and centroverted point of reference, toward social cooperativism and reflective thinking which not only facilitate effective activity but also give unity to nature and a raison d'etre to man. Chapter 4 opens a discussion of the language process itself, concentrating particularly on the dynamic reciprocal transactions of the fully developed capacities discussed here, as they apply to language events.
Chapter 4

THE SYNERGISM OF THE LANGUAGE PROCESS: FORM, ORDER, UNITY AND THE RELEVANCY OF HUMAN DISCOURSE

THE COMMERCE OF SPEECH: ITS UNITS, VALUES, AND TRANSACTIONS

The fixex forms and regular operations of a language, reflecting the articulate and analytic rationality of men, constitute a domain of representations and isolations of human experience. They are symbolic because they are abstractions and refractions of the human stream of speech frozen into sensory shapes and textures. As such, they are governed by their rules of logic, rather than by principles inherent in the very depth and ground of interpersonal commerce. The first are grammatical laws—the rules of syntax, progression of tenses, intonation; the second are the principles of meaning—the laws of denotation and connotation, of literal and figurative meaning, of interpretation. In the stream of speech which occurs during a language event, the two merge, cooperate. When they are studied apart, they return to their own universes.

Meaning, Chomsky notes, is a necessary but not sufficient condition of language. Grammar as an operational description is not based primarily on meaning. It is based on syntactic and hierarchial order which, in actual use, is based in turn on meaning or content. Man responds to utterances in two ways: in terms of the forms of
language and in terms of situational usage. Chomsky (1957:102) notes that the correspondences between formal and semantic differences in response are imperfect, but suggests that the problem of meaning can be clarified if it is studied in the framework of a more general theory of language which will include a theory of linguistic form and a theory of the use of language, both as subparts. In essence, however, meaning resides in the actual and contextual use of language, in the intent of the speaker coupled to the response of the listener.

But the flux of intents and responses must be refined, hardened, and struck into a relatively recognizable and universal coinage which will have currency in the commerce of a particular society. The representative forms may be used at the consensual face-value (literal meaning) or valued for their own sake (expressive meaning). One should not lose sight of the fact, however, that the intents and their representative forms both are the products of intelligent human processes. These processes strive to reorganize and transform the world in order that men may better understand and control it. As a consequence, intents and forms both manifest the principles of purpose, order, and unity which govern the systematic transactions of men with themselves and others. The language process, then, consists not only of the intelligent human processes which represent, express, understand, and manipulate the environment but also of the verbal and cultural forms through which these processes are performed. These symbolic forms also serve to mark off aspects of the environment or contexts which are denoted by the forms. In
short, the language process consists of human acts with verbal forms in specified contexts. The functional relationships among these are governed by the principles of intentionality, regularity and coherence.

The Units--Systems of Representative Forms
(Symbols)

Operational principles of language covering both form and usage can be identified. Polanyi (1958:78ff), has subsumed under his first principle of language--representation--the following laws: the first law of language is that of poverty. A language must be poor enough to allow the same words to be used a sufficient number of times, for the meaning of a word is formed and manifested by its repeated usage. The second law is that of grammar. Only grammatically ordered word-groups can state, within a limited vocabulary, the immense variety of things that are appropriate to the scope of known experience. The third law is the law of iteration. In order that words may be identifiably repeated in different spoken or written sentences, phonemes and letters must be repeatable and distinguishable from shapeless utterances. The fourth law is consistency. Utterances have meaning under the laws of poverty and grammar only when they are used consistently to denote or generalize a class to which we attribute substantial character. These four laws of the operational principle of representation indicate the precise manner in which our view of the universe is implied by the classifications in our language.

Polanyi's second principle, the operation of symbols to assist the process of thought, includes the law of manageability. Symbols,
distinguished from signs which are direct references or pointers to things, and signals which are cues to behavior are scaled "maps" of our experience of the universe having no direct reference but rather metaphoric properties. Polanyi (1958:81) states that:

Language can assist thought only to the extent to which its symbols can be reproduced, stored up, transported, rearranged, and thus more easily pondered, than the things which they denote.

The manipulation of symbols, representing our experience, may involve reorganization into alternative relations, in such a manner that new information is obtainable. This reinterpretation of our experience, made possible through the manipulation of symbols, takes us beyond our information to new insights. Interpretation is an articulate and reversible performance of intelligence, rather than a type of learning. It involves the heuristics of discovery and innovation. It is here that symbolization originates.

The Units--Systems of Expressive Forms (Metaphors)

A special function of symbolization is the act represented by the metaphor. I. A. Richards has asserted (1965:92) that metaphor is the principle of language. The following pages will be devoted to a discussion of the implications of this statement for the study of language. It is important to note that "metaphor" here refers not to a substantive element but to an act involving an individual's cognitive, conative, and affective processes; hence the term "metaphorizing" might be a better substitute. Such an act includes
the use of holophrases to represent a universe of meanings not explicit in the terms themselves.

If these meanings are dependent on more than words for their elucidation, they must then reside in the relation of speaker to listener and to the speech situation. Any more limited conception would place the meaning of the act outside the reach of one participant or the other. It is impossible to know what words "do" in the absence of a person to apprehend them. As signs, however, words appear to function by pointing to a content in the individual consciousness, not to objects. As symbols and metaphors, they indicate resemblances or relationships between two or more contents in this consciousness. Hence, a juxtaposition and contrast of terms which gives rise to a significance not present before must be the product of an awareness of resemblances and not of the words by themselves. Such multiple meanings and ambiguity originate in the self-references of language, that is, the reference of the words (with their explicit contexts) uttered by the speaker to other words and contexts in the consciousness of the listener.

Values—Literal and Figurative Meanings

The act of metaphorizing, then, is the use of words, images, even entire spoken or written works, in such a way that when their literal interpretation does not make sense, that is, does not coincide with one's cognitive "map" of the way things are, one is forced to push the interpretation beyond the literal and to assume that the intended meaning is not literal but figurative. It is thus that the
context determines the level of meaning intended. "Literal" often corresponds to Richards' term "vehicle," while "figurative" parallels the word "tenor." A literal sense of a word usually refers to a conventional use or dictionary definition which is appropriate to a given context, while the figurative sense is unconventional enough that one must search for a context in which it would be appropriate. The first corresponds to the relatively widely shared steno-meanings, as Wheelright (1954:25) calls them, which can be made and kept exact by pointing to examples; the second, to the depth-meanings which the speaker intended when he expressed himself as he did. The latter can only be plumbed by the listener through a knowledge of the speaker, of the relevant aspects of the social and intellectual context including applicable "contents" of his consciousness, and of the customary usages through which such a distinction might be detected. The distinction referred to here, in brief, is between the representative and the expressive (but not emotional) aspects of language, neither of which may be ignored without seriously impairing an understanding of the speaker's meaning.

**Transactions in Traditional Contexts**

Since the major point of Richards' *Philosophy of Rhetoric* (1965:34) is that knowledge of the entire context of an utterance or work is essential to the accurate apprehension of its meaning, it will be necessary to examine his use of the term:

*Context* is a name for a whole cluster of events that recur together—including the required conditions as well as whatever we may pick out as cause or effect. . . . a word takes over the duties of parts which can then be omitted
from the recurrence . . . . When the abridgement happens, what the sign or word . . . means is the missing parts of the context.

Thus, the contexts from which words draw their meanings are concrescences of perceptions drawn into the interpersonal situation. In this view, the literal sense of a word would be its meaning in a specified and fixed context; what is literal is what has been removed from immediate experience and made into an object for all to perceive and share. But for Richards, language functions properly only when it involves both tenor and vehicle. Tenor is the significance of the vehicle to a responsive imagination. All language, when seen in the larger context of the interpersonal situation and when it is realized that apparent discrete impressions of particulars are already concrescences of analogies, of sortings, recognitions, responses, and recurrences of like behaviors, is at base metaphoric. Utterances use the vehicle to refer to the tenor; they draw from the transaction between two contexts, species and genus, to extend the analogies already present in both. Thus, the interchange of words between two persons is more than a summation of the fixed meanings of the words—it is a communion.

While the implicit recognition of resemblances appears to be instinctual and prior in the stages of development of the individual, the emergence of language further assists in the processes of sorting, grouping, and conceptualizing, thus sharpening the individual's "eye" for resemblances. Increasing his mastery of complex networks of relationships and broadening the framework within which he may interpret language, however, depends largely on a later stage—the
explicit perception of **distinctions** and the formulation of **definitions**. The discriminative function, which appears to be cultivated primarily through formal education, when conjoined with manipulative operations which test perception against experience, permits the correction of inadequate and unproductive groupings, and assists the individual to achieve command of the metaphoric mode of thinking and speaking. He is thereby provided with the means for guiding his actions in accord with his maps of reality. In a later section it will be shown that the making of explicit distinctions is the primary function of rational or reflective discourse which increases a person's critical awareness and improves the accuracy of his cognitive maps.

Henle's excellent discussion of the metaphoric function of language (1956:173ff.), makes clear three chief points: metaphoric usage functions (1) to extend language, enabling men to deal with new situations, (2) to give language color, nuance (or ambiguity), and multicontextuality, and (3) to assist propositions to achieve the adequacy they cannot attain solely through explication, reservation, and qualification. In the first and second instances, etymological studies of linguistic change reveal a constant "decay" of once metaphoric usages into ordinary, literal usages. As a matter of fact, Langer (1951:123-125) suggests the possibility that all language was once predicative and metaphoric, and is now filled with faded or fading metaphors, that is, the sense of tensive contrast which they once held is now become lost because the context which at one time gave them meaning, in Richards' definition, has vanished from the memory of society. Such faded metaphors provide the logical subjects of
predications in discursive exposition and the precise, fixed connotations of practical prose. At the same time, however, there is an equally constant regeneration of the expressive, relational "gestures" of language through the influx of new metaphors, some on rare occasions blazing spectacularly into the scientific heavens with the luminosity of a nova. The Copernican conception which placed the sun in the center of the planetary orbits and suggested the term "heliocentric," or Einstein's paradigm, $E=mc^2$ which made "relativity" and "field" household words, were such revolutionary concrescences. The metaphoric act thus permits one to express an idea never expressed before—a novel thought and idea. In discourse in the disciplines, the most common instance of the metaphoric act is the transposition of a term or concept from the context in which it is most familiar, say the notion of biological evolution or "ontogeny recapitulates philogeny," to another discipline, say psychology or anthropology. The results have been truly novel as well as productive manners of viewing the emergence of the distinctly human processes of mentation. Metaphorizing, then, is the act of using one context to refer to another—using concrete names for abstract ones, specific for general, describing an inner experience in terms of outer, shared experiences, or, ignoring logic, saying that "A" is "B". The most frequent occurrences of such acts are evident in the process of naming—fixing and objectifying what was in experience an ongoing event. It would appear that our Aristotelian heritage encourages hypostatization according to classifications of gender, number, time, place, etc., whereas the Hopi Indian will use a single word to express an entire
performance or process. The use of a name, a noun, for a process can be misleading unless one is aware of its metaphoric nature. Mead's use of "mind" is metaphoric, for instance. He meant "minding," a process and not an entity, a fact which is evident from the context. The act of metaphorizing is, moreover, in a sense which accords with cognitive psychology, a bridging between a person's capacity to enact and iconically represent a situation and his ability to symbolize, that is, abstract, it into language. This expressive representation comes very close to what Mead terms "significant symbolic gesture," which will be discussed in more detail in the following section.

In the third instance, the use of metaphor in propositions, Henle notes the fact that it is impossible to make a warranted assertion without metaphorizing. For a statement of fact asserts that something is true in terms of something else which is already known to be true—a statement of belief about a fact. The analogy here exists in the proposition of equivalence between the belief of the truth of the fact and the assertion that the fact is true, regardless of whether it is expressed as an assertion or as an opinion. Austin has termed such an act illocutionary. Underlying the illocutionary act, Alston avers, however, is the speaker's tacit awareness of the synonymy between the utterance and the act he intends to perform in the saying of it. The recognition of this synonymy is, for Alston (1964:38-39) the meaning of the speaker's sentence. It should be noted that, since it is often impossible to state
explicitly how act and sentence are synonymous, it might be more accurate to say that they are analogous—one standing for the other, not in identity, but in the resemblance of the effect intended to the effect achieved.

Henle further argues that metaphors cannot be completely paraphrased, for the interaction of the similarities proposed by the metaphor is lost when it is expanded, qualified, and explicated. He thus sees rational discourse as the paraphrase of metaphor, in itself not totally adequate for the understanding of a proposition. While propositions may be stated using only mathematical, logical, or scientific terminologies, understanding them requires the ability to comprehend the metaphorization which occurs in the context—the analogy implied in the act. It is a demonstrative indication, or predication accomplished in the saying, which "points" to what is occurring in the present experience of the speaker and listener. Hence, it appears that it is the very same capacity for apprehending and positing relationships in the world which makes possible the recognition of resemblances between logically explicated statements and their immediate occurrences. If the metaphoric and discursive modes are to be shown relevant to the understanding of meaning, it now becomes necessary to inquire into their functional relations.

Men play many roles in life, often several successive roles during a given situation. Performer and critic, poet and scientist, engineer and philosopher—all are specialized roles men take which are ultimately determined by the specific ends, practical or aesthetic, sought and valued. Each role, as a consequence, is characterized by
a particular mode of inquiry, an instrumental symbolic system, a
criterion for truth, a procedure for validation, and sets of formal
or informal paradigms which guide the search. Such characteristics
are normally transmitted to the neophyte through encounters with the
activities of the communities of scholars. Role-taking, furthermore,
permits men, through covert rehearsal, to anticipate the results of
certain of their acts. The child in the Weir study was rehearsing
speech patterns and, as critic, correcting them. Snygg and Combs' conceptions of the phenomenological field is no more and no less than
the representation to oneself of a series of possible roles. Social
roles are learned through normal transactions with society; however,
roles involving the cultivated imagination and intellect are learned
primarily through a particularized transaction--an apprenticeship--
with the forms, processes, and scholars of the given discipline. This
section, then, continues the discussion of those synergetic processes
which pervade the verbal acts of men with the representative and
expressive forms of language, but particular attention is now paid to
the roles men take and the paradigms they use in their characteristic
discourses, orderly explication, and metaphoric expression.

Roles and the Relevancy of Human Discourse

In the previous section it was remarked that Mead's term,
"significant symbolic gesture," for him the genesis of the inter-
personal, verbal act, approximated the definition of metaphor as a
bridging of the capacities to enactively and iconically represent a
situation and to symbolize it in language. A gesture implies an act
which indicates or predicates some relatively private event occurring in the individual's conscious experience at a non-verbal level. When it is first verbalized, but not uttered, it becomes metaphoric, remaining closely attached to enactive behavior and predication yet translated now into linguistic forms shared by the community. When the metaphorization is explicated, it becomes discursive and literal. Words are built into a speaker's actions in situations, and conversely, the tacit contexts of words are implicit in them. If an individual has learned the phrases which are appropriate to a given situation, the phrases help him to decide how to respond by presenting him with alternative views of the situation and optional but socially shared ways of responding. The moment he speaks he removes some of the ambiguity from an interpersonal situation, for he has verbally indicated his choice from among possible interpretations of the context. As the discourse proceeds, the context is further defined and communication then proceeds relatively smoothly.

The phrase "vocal gesture" is used by Mead not only to designate an initial covert or anticipatory response toward the expected acts of others or the consequences of acts undertaken by oneself or others, but also to the significance of that vocal gesture for both speaker and listener which may exist in the usefulness of the interpersonal situation for resolving a problem. Meanings (as perceptions of patterns and as distinct from significances), in turn, depend on the intrapersonal structure of the participants: their cognitive maps of themselves, the others, the roles being played by both, and their concepts of the generalized other which constitute
their internalized social norms. The gesture becomes significant for
the speaker when he is able to enact or rehearse covertly the response
in himself which his gesture was intended to call out in the other.
Furthermore, all such responses are not necessarily to present stimuli
(perceptions of events) but may be to past or future stimuli which
the individual consciousness would bring to focal awareness from a
subsidiary field of potentially meaningful experiences or projections
of them. The vocal gesture or inner speech, then, must somehow
represent or imply the complete response just prior to its articulation,
for otherwise one would not know what he was saying as he spoke.

Thus, configurations of individual utilitarian significances
and patternings of meanings contribute to the central intent of a
verbal act; they provide a larger notion of usable relationships which
can lead toward the resolution of a perplexity and thence to
intelligent, purposive activity. Ultimately, in Mead's view, meanings
transact with meanings to produce Meaning—the deed itself.

Poetic uses of language, which most clearly exemplify the
metaphoric mode of statement, lead one toward a new direction of
awareness. The listener is immersed in the poet's peculiar vision,
yet is also asked to perceive this specific individuality as a broader
Weltanschauung, a world view. The listener is set down in the midst
of a strange world without the knowledge of how he got there, for the
poet demands that he suspend his critical and logical activity in
order to become one with the poetic experience. Rational discourse,
on the other hand, tends to build and develop in a logical fashion
an idea which is gradually explicated, taking the listener step by
step through the speaker's thought processes and revealing to him how he got there. By so doing, the speaker asks that his logic be tested and his procedures, structures, and goals be critically evaluated. Rather than rely on semantic compression and metaphoric contrast, the discoursomer prefers to reiterate each thought in several different ways in the hope that at least one statement will be appropriate enough to convey his idea or that the context thus provided will frame his intent. In this mode the discoursomer attempts to rely as little as possible on the listener's capacity to identify with him; however, this "rule of the game" of discursive exposition cannot be observed to any large degree, for it is unlikely that discourse could proceed in the absence of assumptions about the nature of one's audience. What it does accomplish is the "laying out" of ideas in order that they may be manipulated, recombined, and critically examined in terms of the criteria derived from one's concept of the generalized other. But even in scientific discourse, or in propositional language, as in the paraphrasing of poetry cited by Henle, explication has its limitations. Theoretical formulations often rely on figurative language, schema, models, and other symbolic modes to represent processes and relationships. This need to metaphorize is particularly true when descriptions of simultaneous events and ongoing transactional processes are undertaken. Strings of sounds and words, by their nature subject to temporal and spatial displacement, cannot adequately represent such complex events and processes.

In connection with this, Kuhn (1962:43ff.) in The Structure of Scientific Revolutions, has noted that it is the tacitly known
paradigm of the processes and structures of the given discipline which has enabled scholars in the field to develop their conceptions. But when the paradigm no longer successfully accounts for observed phenomena, or when it is no longer productive for study, being more a hindrance than an adequate representation of the world as seen by the particular scholarly community, rules come to assume a role of great importance, permitting research to continue during the ensuing transition. Eventually, the paradigm is replaced by another when a new approach or characterization is recognized, as in the Copernican revolution. Historically, for instance, light has been conceived paradigmatically as corpuscular, as wave, and as photon. Such characterizations have permitted physicists not only to devise manners of measurement guided by the paradigm but also to hypothesize rules to describe the principles observed. As the consequence of the perception of an anomalous event (anomalous because it is contrary to an expectation which is prior to its expression in terms of rules, and to the recognition of its significance), scientists are obliged to raise to focal awareness and reexamine the paradigm implicit in their theory model. Accordingly, Kuhn assigns priority to paradigms over shared rules and assumptions, noting that the use of paradigms seems to reflect something of the nature of the human mind, and the derivation of rules are subsequent operations enabling men to extrapolate from and manipulate the effects of the paradigm. It is also worth noting here that the sensitization which permits scientists to expect, recognize, and discover a new paradigm corresponds very closely to Polanyi's tacit knowledge, that is, enactive knowledge or
intelligent skill gained through the scientist's practice of his discipline which enables him to perform as a scientist but which cannot be articulated explicitly.

It should be possible to see now that there is an analogous relationship between the paradigm and metaphor. What paradigms are for scientific theories, metaphors are for language—the symbolic enactive and iconic models for all that is implicated in, on a small scale, a term, a word-picture, a predication, a proposition, or on a large scale, a world-view. By whatever name, paradigm, myth (as Cassirer uses the term), metaphor, or conceptual map, their resemblances lie in a reference to a particular and coherent apprehension of some aspect of the nature of the world which yields meaning. Meaning in turn reorganizes the individual's role in such a manner that it effectively guides his actions.

Bruner (1966:12) indicates, moreover, that it appears men have the capacity to manipulate only six or seven conceptions at one time; hence the richer, the more productive the conception, the greater one's range of cognitive operations. It would thus appear that the paradigm and the metaphor, as powerful propositions of unity, are ideally suited to this role.

Characterizations and metaphorizations thus function to represent, in capsule form, the intent, the central idea or tendency, the significant verbal gesture, which are immediately prior to their logical expansion and explication. For the individual is both a spectator (of himself as well as others) and an actor in any interpersonal situation, hence his own creations will also be constantly
subject to his critical evaluation and modification. As Frye suggests (1964:27ff.) ideals are bound up with acts, for ideals inspire acts while acts realize ideals. Like Dewey, Frye does not make a distinction between ideas and ideals, for both are regarded as perceptions of purposes potentially inherent in certain modes of behavior. The more experienced in reflective thinking and the more skilled in intelligently performing one is, the fewer are the opportunities for inadvertent erroneous propositions.

**From Expressive Roles to Representative Models in the Communicative Act**

When the expressive and representative aspects of language are described as interacting and collaborating to bring forth existential meaning, the reference is to the power of the latter to objectify the inner experience of the former. Expression includes not only the activity of the affective dimension, but also the tendency of the speaker to posit everything all at once. Thus it might be said that the metaphoric mode of language is more closely allied to the "gap-jumping" process between thought and deed than it is to speech. Dewey (1929:150) saw metaphoric activity as a sort of animism characteristic of the aesthetic mode of apprehending objects. It is the individual in the aspect of actor who pursues the act for its own end. It is the attribution of properties from social situations to natural and personal events, of psychical traits, desires, and intents to inanimate things, as in the case of personification. This mode, in brief, does not distinguish between the self and the other, the knowing and the known. The gap-jumping
process, then, also appears to be the sensed equivalence of thinking something and doing it, or of seeing the potential and the actual. In one respect, it is an activity which permits novel combinations of ideas; in another it is like the synecdoche, a confusion of things with feelings, of actions with things, of parts with wholes, which may cause misperformance in life. Even so, the results of misperformance provide useful information about the nature of the world which can assist the individual to correct his subsequent performances. Thus when an individual operates within the metaphoric mode he is more actor than spectator.

With respect to the representative function, however, the individual is more spectator than actor. In expanding and explicating his message, he is careful to guide his speech according to the perceived requirements of the generalized other—those norms, conventions, and traditionally accepted ways of formulating ideas which smooth the way for interpersonal communication by noting instances of usage which are shared by all. How one comes to know what meanings are unequivocally shared involves, according to Wittgenstein (1953:31-36), the perception of families of resemblances in the uses of classes of terms applied to observable activities between those whose names one has already learned and unfamiliar activities. In this conception linguistic terms are inseparable from their uses; that is, the activities that they are invariably applied to, and their meanings, are natural families each constituted by a network of overlapping and crisscross resemblances. Thus, the speaker need not abstract the rules or the attributes of the linguistic activity to speak meaningfully; he need only recognize the resemblances
between what he is doing when he says something and that corpus of activities already established in his community of discourse. All this is predicated on a model, a network of relationships or resemblances, of what communication is like in the community, acquired through education, exposure to the literature, and discourse with other inquirers. If the individual has learned, he shows it mainly through his ability to successfully carry out the activity characteristic of the discipline and needs no recourse to rules.

Wittgenstein would seem to imply that these natural families of resemblances, through use, come to reside in the objects themselves and guide actions with the names for them, while the subjectivist would contend that the perception of connectedness is purely phenomenological. It is also possible to take the view that these distinctions are artificial. When nature is perceived through the metaphoric mode, distinctions cease. If natural families of resemblances appear, their connectedness is attributed to the natural order of existence. Analysis and evaluation create distinctions in order that apparent resemblances may either be verified or set aside as overgeneralizations founded on insufficient evidence or other logical fallacies. The psychodynamic tension created by the intrusion of analysis and the juxtaposition of the opposites of unity and diversity, facilitates the emergence of meaning—a reorganized, "corrected" apprehension. Meaning here is the comprehension of how apparent diversities are connected in terms of their usefulness for achieving a reconstruction of a relevant and humanly ordered view of existence.
The process of moving from scarcely verbal, almost inarticulateable intent or metaphoric subsumption of purposive activity and/or fully verbal explication depends to a great extent on a preliminary period of reflection and inward soliloquy. The individual must readjust from the requirements of the expressive, inner-directed situation where little distinction is made by the speaker between himself and the listener, and where the paradigm for that which is desirable (including conceptions of the means for its achievement) is relatively clear, to the requirements of the other-directed situation where the paradigm which governs the listener's activities and represents to him what is desirable is much less clear. The speaker may make an intelligent guess based on experience (and practice) about these requirements and motivations. He is thus able to state his proposition, expand and explicate it, and modify his original estimate as the discourse proceeds either through observation of the listener's response or through feedback from the generalized other, or both, depending on whether the interpersonal contact is direct or vicarious.

It should now be possible to see that metaphoric subsumption and rational discourse are really degrees of compression and expansion, of existential meanings in flux, and shared, fixed linguistic meanings, respectively, along a continuum of language uses governed by the purposes these uses are intended to fulfill. Such uses depend for their meaning, in turn, primarily on the interpersonal context of the speaking situation and the organization of the "self" which interprets it. When an individual speaks he is not only
"pointing" to examples of things, events, acts, or states of being with language, but is also "pointing" to his purpose in so speaking—the true content and meaning of his utterance. The first "gesture" refers to the representative function of language which utilizes largely low-level generalizations or abstractions having fairly widely agreed upon significances for persons in a given linguistic community; the second refers to the expressive function. Each word uttered subsumes the speaker's purposes, and the comprehension of their fullest meaning depends on the listener's empathy with the speaker, with the topic of discourse, and with the relevant context or background brought to focal awareness, which would assist him to fill in such logical gaps as might appear when the novelty of an idea outstrips the speaker's capacity to articulate it. The speaker in turn must rely to a greater or lesser degree on this empathy, for the representative function of language is a limited one. Simply pointing to examples will not convey meaning unless the act is preceded by the expectation that meaning will be discovered in the gesture; that is, that the individual already knows, subsidiarily, what the meaning is, and unless it is recognized or brought to focal awareness, and unless its relevance to situation, speaker, and listener, is apparent.

To proceed with the discussion of meaning as a tacit recognition of potentiality for some consequence it will be necessary to examine some essential distinctions which must be made. Miller (1965:15-16) in a previously cited article has pointed out that the distinction between reference and meaning becomes
particularly clear when whole utterances are considered; that is, when sentences or brief utterances intended to stand as sentences rather than when words, acoustic and psychological properties of speech, intonation, etc., are the points of reference. In focusing on the syntactic and semantic aspects of the utterance it is possible to note that the power to signify and the power to refer to or denote some particular environmental stimulus should be distinguished as necessary but in themselves insufficient conditions for the description of language functions. Meaning, Miller asserts, is a considerably more complicated phenomenon of language than mere denotation, for objects and their symbols may not have meaning to us unless we can also see the relations of a symbol to other symbols in the language and to some kind of subjective perception of meaningful patterns based on our experience and critical thinking. Thus, the meaning of an utterance, Miller concludes, is not a linear sum of the meaning of the words that comprise it; quite the contrary, the whole is greater than (or at least, different from) the sum of its parts. For whole utterances are governed by syntactic laws which group and organize sentence elements hierarchically, and by contexts which define the references of these elements.

Ausubel (1963:35) has attempted to distinguish between the uses of the terms "logical meaning" and "psychological meaning" in the context of a psychology of meaningful verbal learning. His conclusion is that meaning, treated as a relational concept, is a phenomenological outcome of a meaningful learning process in which the potential meaning inherent in the external world is translated into an
individualized psychological state or content of consciousness. He accepts the existence of differentiated states of consciousness, and uses this basis to describe the process of the growth of meaning of a verbal proposition about the world for an individual whose cognitive structures have been developed in such a way that the pattern or significance of the proposition becomes clear, viable, and useful to the self. The self here is conceived much in the manner of Dewey, Mead, and Snygg and Combs' "phenomenological field." For Ausubel, logical meaning refers to potential meaning residing in the attributes of non-arbitrariness, lucidity and plausibility in a proposition about the world. Psychological meaning, then, arises from the incorporation of this potentially meaningful proposition (as apposed to a verbatim, rote or arbitrary association) within the individual's cognitive structure. Thus, psychological meaning is actual or effective meaning. It is actual because nonarbitrary and immediate learning has taken place; it is in part subjective, in part social or shared. Hence, to a certain extent, some propositions have significance for an individual because these propositions are, to a degree Ausubel does not make explicit, universally meaningful. It is then possible to say that what is meaningful to an individual is that which is patterned and clearly purposeful for him.

Meaning as it should concern the student of psycholinguistics does not involve so much existential, signifiantional or relational, denotative or referential, extensional, intensional or connotative meanings as much as it does central meaning; that is, meaning as an idea, a nonovert or implicit response an individual makes to any other
response, overt or implicit, which acts as a stimulus. Meaninglessness is negative—no response at all, which signifies that what has been uttered has no correspondence with an individual's present activity and interest, or with some "sympathetic" equivalent in his phenomenological field, or that he is somehow unable to bring the correlate from ground to figure in this field. It thus appears that a minimal starting place in the study of meaning is the complete utterance, not any part of an utterance. This complete utterance may be Chomsky's kernel sentence from which a corpus of actual utterances may be generated through ordination and expansion. The meaning, for the speaker, is actual in a kernel sentence; it becomes actual for the listener only as the central idea of meaning is expanded, transformed and made more explicit. Thus expansions are explicit meanings which have been given form and order. What prevents ideational meanings from being entirely subjective is the fact that they are in part social and shared. They are then, universally meaningful propositions, or expressive evocations reflecting life-values held in common by men through common experiences of the qualities and universal traits of things, persons, situations and events, and may be verified by direct experience, by introspection, and by consensus.

Thus it appears that not only reflective thinking but also meaning arises in the interstices of language, in the dynamic interrelations of words and phrases having different functions, values, tonal flavors, and in the interactions of one on the other as consciousness tries to elicit some kind of meaning out of the juxtaposition of two apparently unrelated "pictures." According to
Dewey (1929:144-145) we approach the stream of speech with the conditioned expectation that we will find meaning there. If this expectation is unfulfilled, we are perplexed. Reflective thinking is initiated by uncertainty among possible alternative literal or figurative meanings. We inquire into the total context of the interpersonal communicative situation and covertly experiment with interpretations which are most clearly justified by the context and which correspond with the speaker's perceived intent. If a literal meaning does not fulfill the conditions, a figurative meaning is implicated. Errors arise, however, when figurative intents are read as literal. Since this process of interpreting and warranting is presumed to occur for both speaker and listener, it seems evident that Dewey's statement that a linguistic communication is fundamentally a warranted assertion, can be justified on the ground that erroneous assertions must then be the product of an unsuitable habitual response or an uncritically accepted belief. The application of destructive analysis to the assertion, in terms of both context and intent, could disclose the nature of the misperformance as an insufficiently explicated proposition. For Dewey, then, the use of language is synonymous with the communication of meanings. Meanings for the individual arise in the transaction to and fro between reflection and verbalization, between intents and situations which appear to call for a response. Meanings begin to appear as he perceives the patterns of relationships between things which cooperate with and facilitate the sort of activities he wishes to carry out.
Polanyi (1963:21-22) casts a great deal of light on this problem in the following remarks intendend to suggest that the purely tacit operations of the mind are processes of understanding, and that the understanding of words and symbols is also a tacit process:

Words can convey information, a series of algebraic symbols can constitute a mathematical deduction, a map can set out the topography of a region; but neither words nor symbols nor maps can be said to communicate an understanding of themselves. Though such statements will be made in a form which best induces an understanding of their usage, the sender of the message will always have to rely for the comprehension of his message on the intelligence of the person addressed.

... This holds, of course, also at the point from which a statement is issued. We utter a statement with the intention of saying something. Though this intention may not include an anticipation of all that will be said--since a message may develop further as it is put into words--we always know approximately what we mean to say a little before we say it.

... I have now expanded the function of understanding into that of knowing what we intend, what we mean, or what we do. To this we may add now that nothing that is said, written or printed, can ever mean anything in itself; for it is only a person who writes something--or who listens to it or reads it--who can mean something by it.

Thus it would be possible to comprehend most meanings were all conditions ideal. But failure to communicate can stem from many factors: if the many usages and possible meanings of a word are not understood owing to a functional fixedness acquired through rote or reception, rather than inquiry or discovery learning; if the proposition is unrelated to a person's present interest or activity; if he has failed to subsume the necessary information for comprehending the message in such a way that it can be easily retrieved; or if the metaphoric quality of the utterance conceals a number of implicit, possibly invalid assumptions, thus creating an untruthful formulation.
Along with the potential of metaphors to guide thought and inquiry, therefore, there exists an equal potential to misdirect. Popper (1959:141-142) avers that it is the apparently simple proposition which most easily lends itself to falsification, for it is unexplicated and unqualified. On the other hand, he points out that these very features make simplicity eminently desirable, for such propositions have a greater empirical content and are more readily testable than those less simple. In effect, metaphors, like paradigms, are basic statements of coherent relationships which subsume a great deal and ultimately lead to actions.

The avoidance of inadvertent, erroneous propositions rests squarely on the developed capacity of the individual to reflect, to rehearse and experiment covertly, and to recognize departures from what he has learned to expect in the ways of consequences stemming from his socially and intellectually acquired paradigmatic conceptions of the world.

The language of science— the explicit, expanded utterance—serves well the purpose of science: that of explicating meaning in a logical form. Metaphoric and logical language, then, are but aspects on a continuum: the first linked to sense and the last to other symbols. They both grow out of inner speech, acquiring their characteristic forms through the process of expansion or of compression, in turn dependent on whether the person speaking is presenting the idea from the inward or an external point of reference. Meaning in a technical sense, furthermore, centers on the personal idea— the tacit response (inner speech) of a person to his transaction with the
environment in terms of his phenomenological field—and all other classes of meaning: relational, extensional, intensional, existential, and significative are but special cases of meaning, denoting certain specific relations between words, objects, signs for the objects, symbols, intents, and syntactically ordered groups of words. It now becomes possible to conclude, then, that the individual ideas of one become fully meaningful to another when the latter is able, at least for the instant of comprehension, to cease being himself and become the other in terms of consciousness. The recognition of meaning is a presentational act—a surrender of identity and of the critical self in order to reenact the experience of the other. Thus interpretation proceeds, first, by the apprehension of the whole event which surrounds the idea the speaker has represented or expressed, and second, by the analysis and reconstruction of the purposeful ambiguity which has been achieved through the metaphoric use of language. Because the interpreter is also, at other times, a speaker, he is aware of the rhythmic expansions and contractions of the language process, hence he is capable of supplying the missing (and most appropriate) contexts which are requisite to the accurate representation of the speaker's intent.

These, then, are the central ideas of Chapters 3 and 4 which are crucial to a holistic conception of the language process: Man is no longer entirely restricted to defensive overt reactions to stimuli from the environment, nor confined to the dimensions of his body and senses, nor subject to random and meaningless natural events. Through the emergence of his capacities to abstract and symbolize, man is now
able to respond in a dynamic and cooperative manner to stimuli, in such a manner that he benefits not only himself but also the whole human society. His covert rehearsals, facilitated by symbols and tentative role-taking, permit him to anticipate the consequences of his actions, and thus give him control over his actions. His symbolic networks or culture provide him with a meaningful environment and a means of transmitting the accumulated wisdom of men in such a way that the synergetic system of human society is further enhanced. Man thus develops his potential capacities to reflect and act intelligently, and to extend the scope of his activities far beyond the confines of his body.

By manipulating his symbolic representations of experience, man learns now to value certain acts, objects, or processes over others, in terms of possible consequences or in terms of intrinsic value. He thus also becomes aware of alternative ways of representing, acting, and valuing, alternatives which further extend his grasp of the world and his competent performances in relation to it. Therefore, the world of knowledge is a unity because it is man, the symbolizer, who is actively knowing, feeling, and performing.

The forms of language are but one aspect of the language process. They are but symbolic, extrinsically valued representations and intrinsically valued expressions of human experience. The speaker must know the whole of what he intends before he can know how he intends to say it. Likewise, the interpreter must know the whole of what the speaker means before he can understand how he means what he says. Each act involves a subsidiary and participational awareness
of both the roles being taken by the self and the other and of the functional relationships created by the transaction between the two. To speak, then, man must next discover the relations between his intents and the forms which serve for the commerce between persons in society. The forms may evoke further human experiences which will modify the original intent. Taking the role of critic, however, the speaker now listens to himself and explicates his purposely ambiguous metaphorically-expressed intent by restricting some of the possible contexts. The extent to which he explicates is determined by his estimate of the interpretative capacity of his audience.

The interpreter, on the other hand, successively participates in the *gestalt* of utterances in terms of their meanings, and systematically searches the representational and evocative symbols of experience for clues to direct the continuous reorganization of his estimate of the speaker's role. The interpreter ultimately comes to understand the speaker only because, as men, they are both seekers after personal relevance, unity, order, and meaning. Hence, a holistic conception of the language process must begin and end with symbolic man who transforms experience, represents and expresses it in forms, and communicates, with these forms, the existential relevance and meaning of his experience of the world to others.
Chapter 5

A SCHEMA UNIFYING THE DIVERSITIES IN THE LANGUAGE PROCESS

The preceding chapters have introduced and discussed the specific conceptions, empirical and descriptive data, as well as assumptions of particular theories grounded in the philosophical stance of holism, which seemed to have potential for a productive, semantically oriented, and humanly centered conception of the language process. Chapter 5 has as its objective the development of a model or schema of the language process from such theoretical conceptions of man, culture, and language. Chapter 6 will suggest what implications the theory-model has for a curriculum theory of English.

RETRACTIVE THEORY-BUILDING

Theory-building is initiated as a consequence of inquiry, for inquiry cannot proceed without a hunch about where to look and what to look for. Joseph J. Schwab (1964:8-9) suggests that this "hunch" is in effect a conceptual structure borrowed or invented by the inquirer which serves as a guide to relevance and level of significance in the collection of supporting (and discrepant) data. The Baconian perspective, using inductive logic, may well serve as a method for hypothesis testing, but according to Maccia (1965:8-10) is limited in its power to formulate an adequate theory for the following reasons: (1) the Baconian inquirer denies starting from a conceptual
structure, yet invariably does, with the consequence that his assumptions are not explicated and may be found inadequate. To ignore the conceptual structure which colors the inquirer's observations, categories, and variables, unfairly biases the formulations derived therefrom; (2) low-order generalizations cannot be induced and summated into high-order generalizations which have a greater content unless something unspecified has been introduced along the way. It is for this reason that Maccia has urged the adoption of the retroductive theory construction. It rests on the assumption that all inquiry is directed toward knowledge production. The theory-model is the systematic statement of the scientific "hunch" which begins the process of inquiry. It strives to formulate adequately the cognitive claims of the hunch for purposes of making explicit the implicit factors which inevitably occur in the collection and interpretation of data. Using the retroductive method, an essentially interdisciplinary conception, the scientific theorizer begins his formulation by selecting wanted aspects of the theories which first suggested the hunch to him. He then sets about devising a model on the basis of these in such a way that all elements appear consistent, comprehensive, and adequate. From this basic model a theory may then be elaborated which would develop cognitive claims, set forth terms, relate terms to hypotheses, and derive postulates from the hypotheses. The final task of scientific inquiry would be the justification and verification of the primary claims. The scope of this project, however, is limited to a description of the schema alone.
The schema to follow, then, is a verbal model or conceptual structure of a theoretical language process based on an extrapolation from the key concepts presented in Chapters 3 and 4. These have been reduced to a consistent terminology and appear to be adequate representations of language events occurring within the parameters cited in the first chapter.

MAJOR IDEAS UNDERLYING THE MODEL OF THE LANGUAGE EVENT

There will now follow a synopsis of the major ideas developed in Chapters 3 and 4 which are applicable to a conceptualization of the model.

A Synopsis

1. In this inquiry, the semantic nature of the functions of language was postulated from an assumption of a holistic and transactional view of human activities. The "field" paradigm of modern science, which represents aspects of the natural world as systems governed by fields of forces, was used to support such a view. When whole systems are observed from this point of reference, they exhibit the operations of principles of organization, process, and unity; and transitoriness, stasis, and differentiation when their parts are observed.

2. Applied to the study of language events, such a view requires the observation of all relevant factors and their relationships as a synergistic whole. The surmised consequence of this interplay of forces was an intra-cognitive and interpersonal
communication leading to the apprehension of existential meanings.
Language was seen, then, not as a substantive entity but as a
continuous extension of men's cognitive, affective, and manipulative
activities, enabling men to interpret and organize reality and deal
competently with events in their environments.

3. Interpersonal linguistic communication was perceived, in
this sense, as networks of connections between individuals and other
individuals, between societies and their members, and between larger
social systems, over historical time as well as in present time. These
constitute one aspect of the field of forces governing and unifying
the lives and activities of mankind. Language manifests itself in the
pervasive depth and ground of men's being: in their culture, community,
thinking, experience and existence.

4. Each linguistic transaction not only transforms the
environment in which it occurred, but the language forms themselves
also undergo some transformation. The stream of speech, to use the
terminology of the communications engineer, becomes the patterned
modulations of the impulses of energy existing as a result of the
transaction of elements in the system. The message is transmitted on
a wave length appropriate to the receiver and is made intelligible
through the sender's ability to modulate the frequency of the wave in
accord with shared message systems.

5. Interpretation depends on the ability of the receiver to
become attuned to the sender and to decode his message. The object
of the transaction, however, is the conveyance of meanings through
the contextual verbal act which subsumed the linguistic forms
comprising it, rather than through the forms themselves. Focally relevant aspects of the listener's and speaker's phenomenological field (the immediate constituent environments) provided the conditions which shaped the actual form of the message and governed its interpretation. The basic conditions for a successful language event included: the participants' capacities to become socialized individuals, to use symbols, to become objects to themselves, to take the role of the other, and to utilize a store of learned information, habits, values, and goals in a systematic manner.

6. The constituent forms of language were seen to be analytically derived hypostatizations from complete, natural speech events. In abstracting the attributes and properties which parts derive from their wholes, and by removing them from the realm of direct experience where spatiality, temporality, and causality govern their effect, men have created the uniquely human domain of discursive, symbolic forms. The act of naming, positing, or qualifying makes the world of gross experience and imagination, of events in constant flux, to stand still. Differentiation then becomes possible, and novel combinations may be attempted. Validation of these recombinations is practicable through experimentation or through the accreditation of tacit knowledge which perceives their relevance for and correspondence with actual experience. Meanings become fixed, literal and widely shared, like artifacts exhibited in situ. Men represent these contexts as if they were objects in order to communicate precisely. Words thus used become "mindless" language, as it were, pegs for contextual associations.
7. The metaphoric speech act, interpreted broadly, on the other hand, was shown to bridge two different orders of language—the formal and the experiential. When viewed in a restricted context, the former manifests itself in naming and in discursive uses of language; the latter, in verbs, predication, models of functional relationships, and metaphoric uses. The symbolic world of relatively independent fixities has sprung out of systems of immediate human experience undergoing increasing differentiation, while the experiential world of teleological processes has been developing toward order and completeness. Metaphorization succeeds in jumping the gaps between these two worlds by partaking of both: by existing as fixed meanings and shared contexts which refract reality, and by functioning to relate these to personal and unqualified apprehensions of reality.

8. In life, an awareness of the relevance of certain means for certain ends emerges as a consequence of a perplexity which initiates a search for patterns of connectedness. The meaningful reorganization of an individual's perceptual field which is often described by optical metaphors like illumination, enlightenment, and clarification, permit him to integrate the cause of his perplexity and to proceed.

9. The central or ideal meaning of a person's words is ultimately to be found in the totality of his deeds. For as speech moves from wholes toward articulation, from metaphorization to rational discourse, it also leads to overt responses which subsume
all prior distinctions and qualifications. These overt responses are the product of the individual's role: that paradigm he has of himself, of the nature of the world, of other persons, and of the way he should act toward them. Hence, the role the individual takes is what guides his actions.

A MODEL OF THE LANGUAGE EVENT

The Naturalistic Background

The model conceived here takes as its starting point a naturalistic approach to the act of communication, which is seen as a social process in which some of the events take place within and others take place between the individuals involved. Naturalistic means here that individuals speak in languages and their dialects, and not in their models. The model is rooted in the more general model of interpersonal behavior conceptualized in Mead's system of the social act seen there as a dynamic whole consisting of much more besides stimulus and response, and having "both an inner and an outer phase, an internal and an external aspect" (Mead, 1934: 7-8). The central idea here is that the relationship of any biological organism to any environmental object is a dynamic one in which the properties of the object that are involved in the relationship do not inhere solely on the object itself but emerge from the relationship that exists between organism and object. Even elementary biological organisms approach environmental objects not in terms of the properties of the objects alone, but also in terms of their own needs and natures. Thus, any response-inducing property that an object is
presumed to have is essentially put there by the responding (acting) organism.

The Hierarchical Social Acts Involved in the Language Event

Acts can be classified in a hierarchical fashion, both in terms of the inherent behavioral properties of the organisms involved and in terms of the signals that pass between organism and object. At the highest level, social acts occur between human beings whose mediating gestures are superseded by arbitrary symbols. At this highest level, the behavioral characteristics and response capacities of the participating organisms include:

1. The capacity to use symbols.

2. A reflexive capacity by which the individual becomes an object to himself. He places himself in the external environment along with other environmental objects, and responds to himself in somewhat the same fashion as he responds to other objects.

3. An empathic capacity "to take the role of the other," and thus to estimate more or less accurately the attitudes and characteristics of the other and to look at things from such a point of view.

A fully developed self consists essentially of these capacities plus the store of learned information upon which the processes work. The socialized human individual uses the three capacities to perform a complex internalized analysis of any action intended with respect to any stimulus object (including other humans) before he acts in order to make a prediction of a likely result.
The Importance of the Intrapersonal Component

In this view then, a language event may occur between two or more persons, a reader and a manuscript, or in any situation which causes the overt or covert articulation of some idea or motive as it is brought into consciousness by a shift from subsidiary to focal awareness. This feature distinguishes the schema described here from that described by Brooks (1960:2-22) which presupposes to a large extent that language use culminates in interpersonal discursive communication conducted for essentially immediate social ends. The model presented here further stresses the intuitive, intrapersonal use of language in its metaphoric aspect (to which imagination and novel ideation are keyed) as the basic process through which the human intellect emerges and continues to be developed. The human intellect is able to go beyond sensory experiences to the creation and appreciation of nonphysical human environments and networks of environments. During a language event, speaker and audience, or author and reader, bring to the event a long history of assimilated living experiences, remote social ends and immediate personal intents, intellectual development, language practice, and orientation to human environments, any aspect of which may constitute the mediate context at a given instant in the discourse. The immediate context is provided by the topics and purposes of the discourse, the conditions of the natural environment, and any abnormal conditions affecting the participants i.e. dislike of speaker, illness, delusions of grandeur, etc.
To summarize then, a language event involves two orders of processes: (1) The *intrapersonal* transactions that go on within each participant in which his psychomotor, affective, and cognitive functions cooperate dynamically to bring forth speech, and (2) the *interpersonal* transactions which result from the contiguity of human sub-systems, each desiring commerce with the other, and each assuming the appropriate role of speaker or listener with respect to the other within the conventions of society.

**The Capacities Needed for the Language Event to Occur**

Subsumed in the intrapersonal and interpersonal processes are capacities which participants in a language event must have developed to some degree before the event can occur. The capacities to be detailed below are systematic abstractions from selected aspects of views on the process of linguistic communication taken from several of the main positions considered in prior chapters. Most useful to the discussion below were Mead's (1934) notions of socialization and role taking, and Cassirer's (1944), (1953), theory of symbolic forms. The notions of cognitive development advocated by Piaget (1954), Vygotsky (1962), and Polanyi (1958), (1963), provided the foundations for the process whereby individuals transmute lower-order and undifferentiated capacities into higher-order, specialized systems. Individuals then adapt themselves to their conception of the world, recognize the problems in the conception, and cope effectively with the dissatisfaction produced by the recognition of those problems. A synthesis of the views of Church (1961), Piaget (1954), Vygotsky
(1962), and Langer (1951) indicated in a general way some of the major problems in understanding the child's early language development from preverbal speech through the appearance of the first word combinations. Whereas Church and Piaget both see cognition studies as the essential key to the understanding of language, Vygotsky affirms that it is language which, after a degree of early cognitive development, is the primary shaper of man's view of the world. Useful here also was Bruner's (1959) notion of synergism, as a way to the discovery of novelties. Psycholinguistic studies by Weir (1962), Bellugi (1964), Brown and Berko (1960), and Brown and Fraser (1964) traced the acquisition of grammar and syntax in the child's language growth. The studies revealed significant and puzzling developments (covert rehearsal) in the child's cognitive structuring of his knowledge and in the operation of his thought processes. Gessell (1960), Langer (1951), and Church (1961), provided the basis for the progression in the perception of reality by the child—the progression from the nonlogical to the logical, from the intuitive to the rational.

The capacities which participants in a language event must have developed to some degree before the event can take place are:

1. The ability to use symbols systematically for immediate and social contexts in human-to-human interaction for a level of communication that is syntactic and usually purposive. In particular, participants have developed language suitable to any immediate or larger personal or social contexts according to a system of social relationships.
2. The ability to rehearse covertly alternative suitable responses when motivated by stimulus inputs, and to organize any forthcoming responses so that they become instrumental acts. Any act must be developed and organized before it is performed. The participant's aim is to perform an overt act that will induce another to perform an answering act. It is a synergetic process by which the intracognitive and interpersonal processes lead to the apprehension of existential meanings. The individual rehearses by making covert trials of his own possible actions (role playing), and of the possible reactions of the other (role taking), as far as he knows or can guess them. Moreover, the overt practicing of any competencies achieved and experimenting with their effects, leads to the discovery of novelties.

3. The ability to organize an act so that the individual considers his own capacities to elicit desired behavior from another, the other's willingness and capacity to respond, and all the social rules that regulate the social relationships the participants have with respect to each other. Moreover, situations themselves are defined by social rules, and so are the forms of persuasion and methods of inducement. Also, idiosyncratic elements originating from the individuals' own biosocial traits must be considered.

4. The ability to participate directly in events, as actors, and to critically judge inward or outward events, as spectators, by projecting inward experiences or external events. Upon reception of a stimulus created by the sender's instrumental act, the receiver also covertly rehearses similar judgments and interpretations, in which he considers the social rules, and his assessment of the sender's
relationship to him. The assessment of the situation will rarely be identical, so that from the standpoint of both participants every social act has a problematical element in its predictive outcome.

5. The ability to generate, expand and explicate ideas that first emerge from inarticulate responses to key terms or holophrases, and finally to logical form. The individual begins with available and systematically reduced ready-made phrases which are modified to suit the intent. Participants manipulate such holophrastic words to reconstruct their roles, so as to progress beyond sensory experience to adapt to and create nonphysical human environments while appreciating complexities and recognizing harmonious unities. Essentially, it is the ability to differentiate and define sensory and conceptual events, then to reorganize and subsume them.

6. The ability to make choices from among alternatives on the basis of their validity in past, present, or projected future experiences. An intrapersonal language event directed toward personal communication is essentially a rational, social affair. The speaker must make judgments about the other in relation to himself (knowing whom). This means that in selecting a receiver the sender must know his own social identity as well as the identity of the other. The sender must know who he is in relation to others in his group. This is no easy matter. An individual must have much sophistication to be aware of any status he can claim in his group. Moreover, the sender must consider the receiver's traits: age, sex, intelligence, learning, etc., in order to imagine whether such a person will interpret the available forms of the message in the desired manner.
7. The ability to generate a message so that the general idea, wish or intention the sender wants to transmit (what-to-say), is clearly presented. What is required here is that the sender have full knowledge of the social structure and of the subtleties of the social relationships which have been internalized in the form of a social map. Judgments are made about the purpose or intent of the message. For example, the sender needs to recognize the necessity to put his thoughts into a form that will both satisfy himself and will be intelligible to others, once he decides on the general idea, wish or intention to be transmitted. Much complexity is involved in determining what to say. If the exchange situation, for instance, is characterized by tension, suspicion, or deception, ingenuity is required to avoid saying too much, too little, or the wrong thing.

8. The ability to determine the how-to-say-it task in message generating, following the determination of what to say and to whom to say it. It involves transducing material into a code for transmission through a convenient channel to the intended receiver. Involved here are problems of vocabulary selection, the assessment of the receiver's willingness to accept the message, his ability to decode it, and whether he is committed to a social role calling for the performance of behavior desired by the sender. Even though English affords the user a very large vocabulary, new words are added frequently. Also, by custom, certain words are restricted to certain categories by individuals. There are also the limitations and requirements of grammar and rules of syntax in restricting what can be said and in determining what must be said in every utterance. Various categories
of individuals, in occupations and cliques, for instance, follow established customs of language use which participants must observe if communication is to be mutually satisfying.

9. The ability to fix in the participants' consciousness, by means of names and phrases, personally relevant perceptions so that by readjusting their roles (configurations of tendencies to respond in given ways) participants may overcome satisfactorily and effectively any obstacle interfering with desired immediate ends. Knowing-what-to-say, knowing-how-to-say-it, and knowing-to-whom-to-say-it are brought successively into focal awareness from initial response to interpersonal contiguity. Such judgments are expanded into alternatives, scanned for selections, and projected into consequences through covert rehearsal. Eventually, choices are made from available linguistic structures in a process of encoding and generating.

10. The ability to integrate the three necessary components for effective message generation and reception. First, that the proper identities of self and other be expressed in the message. Second, that the sender also engages in role playing while constructing his message. Third, that role taking provide the sender with information about the response potentialities of the receiver.

11. The ability to recognize that the selection of the units to be included in the message requires more than the mere stringing together of phonemes and morphemes into an orderly sequence determined by the statistical probability that one particular such unit will follow another in an English utterance. Rather, the sender composes his message by a trial-and-error process in which he first imagines a
possible message that may be composed with the available vocabulary for transmission over an available channel (role playing), and then imagines how the intended receiver will interpret it (role taking), and how well the message comports with all syntactic and social rules. Successive trials, observations, and corrections of perceived errors will result in the best possible message to be transmitted.

12. The ability to use an error-correcting system which is essentially the operations of a feedback "loop" which controls the oscillations of the system. In this case, the sender, when testing his initial imagined message against imagined response, may find that it falls short of the intended mark. If the feedback loop is working properly and is returning correct information, each subsequent trial will be an improvement. As this process occurs within the sender before the message is transmitted and depends upon error-indicating information generated by the sender himself, it may be called intrapersonal feedback. A speaker constantly monitors and modifies his vocal output while he is speaking, and a writer monitors his written output and rewrites it. This is "intrapersonal feedback" in the same sense as is the entirely covert process, although part of the feedback circuit includes light and sound waves external to the individual.

13. The ability of the participants to have accurate information in their cognitive maps of the environment, in order to enhance the actual degree of success in message generation, transmission, and reception. Moreover, the sender must be aware of the necessity of taking the role of the other (the receiver) and having the ability to do so. He controls the process if the intrapersonal feedback system
supplies him with error-indicating and error-correcting data. A source of deficiency in communication is that of ignoring the intended receiver, having incorrect information about him, or making wrong assumptions about him.

The Expression of Novelty by Metaphorizing

Thus, the intrapersonal language event, stimulated by the integral mass-media, electronic environment which surrounds contemporary man, begins when the individual scans the event for patterns which he may recognize. Verbal categories assist this process. Some patterns may not come under any verbal category for him, however, due to the fact that neither he nor anyone else he has read or listened to has articulated the pattern. If he wishes to communicate it, he resorts to metaphor to express a thought or idea never expressed before. Reference is made here to Polanyi's (1958) novel uses of language and its contents in the domain of sophistication; Henle's (1965) notions of the metaphoric function of language; Langer's (1951) theory that all language was once metaphoric and is now filled with faded and fading metaphors; and Richards' (1965) tenent that all language, when seen in larger context of the interpersonal situation, is basically metaphoric. The individual must first be able to perceive the resemblances between the event he wishes to describe and its verbal counterpart. The capacity to make this intuitive leap toward novelty appears susceptible of cultivation through the heuristic approach to teaching and by providing opportunities to depart from the habitual and the literal through the effort of making a new connection between different perspectives. As connectedness appears, the individual
struggles to link the ineffable to the literal. Success arrives with the use of the most appropriate word, holophrase, or metaphor. Should he attempt to define the linkage, however, he would succeed only in fixing it within a particular context, thus losing the useful ambiguity it achieves by being poised between two worlds.

The Known Patterns Which Mark the Transition from Intrapersonal to Interpersonal Communication

Once the progression is made from intrapersonal to interpersonal communication, that is, from the intuitive level to a more rational social occurrence, the model of the language event is shown to exhibit, at the moment of utterance, several well-documented patterns as Brooks (1960) has shown. These patterns are: phonation, explication, and modification. The sounds (or written signs) for words are produced and cast into syntactic form according to complex choices among perspective and person, predication (mood, tense, and voice), and reservation (modifying words and clauses). As such, they are then developed around a kernel sentence, as Chomsky (1957) avers. Such a sentence has a subject and predicate and may be expanded or explicated through the addition of added qualifying terms or sentences into complete paragraphs or entire works. To this should be added the final metaphoric subsumption which is the recapitulation and reorganization of the explicated phase of the discourse. For the individual's cognitive capacities, this would correspond to a concrescence of "knowings" into a role or paradigmatic conception of self in terms of the environment and actions eminently suitable to it.
The Arrival of Understanding

Throughout the process of interpersonal discourse there is constant feedback from the speaker's utterances and from the listener's visible reactions and verbal responses which serve to further modify successive utterances and role conceptions. The receiver's principal role is that of decoding the linguistic symbols and interpreting them. Only when the complete message has been received can be comprehend it. It must be recalled, however, that all decoding, interpreting, and comprehending, occur in terms of subsidiary awareness of the entire meaning of the whole utterance—a concrescence of meanings. As in the case of the speaker, the listener must make similar judgments conditioned by his degree of awareness of the speaker's intent, frame of reference, topic of discourse, and other features of his mediate and immediate environments. The listener's role, or better, his conception of his role, governs his interpretation. But both speaker and listener ultimately rely on the intelligence of the other, as Polanyi (1958) has suggested, for the successful completion of the language event. The event then transcends the mere elements of speech to become virtually an ineffable communion between participants.

In short, the speaker moves from an awareness of a notion of the role of the other, to an awareness of his own metaphors (meanings), his discourse, and finally, his role. The person addressed first becomes conscious of his own role in terms of the other, then the speaker's discourse, the metaphors which underlie this stream of
speech, and finally of the role taken by the other in what is essentially understanding.

The implications of this model of the language process for a curriculum theory of English change and broaden the actual, more limited, conceptions from which schooling practices are derived. The following Chapter explores these implications.
Chapter 6

IMPLICATIONS FOR A CURRICULUM THEORY OF THE LANGUAGE PROCESS

Maccia (1964:15) has indicated that one theory can become a model for another theory. In Chapters 3 and 4, a holistic theory of the language-using intellect was made explicit. In Chapter 5, this theory was used for the derivation of a schema or model for a theory of the language process. Such a model is a necessary link between the world of knowledge and the world of curriculum theory, from which, in turn, logically consistent school practices are to be drawn.

Between a model for the language process, which these conceptions represent, and a curriculum theory of the language process, however, a conceptual gap must be spanned. The theory would consist of explicit assumptions, theoretical conceptions, and empirical and descriptive data. This inquiry does not propose to attempt the development of such a theory; it alone would be a major project. However, the basic purpose of this study has been fulfilled: there has been developed a model for the language process from compatible empirical and descriptive data, from theoretical conceptions in which the major assumptions were made explicit, and from a consistent, holistic frame of reference.

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Of course, any philosophical stance, as this model of the language process is, may be found wanting. It is often too easy to derive practices from a theory while overlooking the necessity of setting up an evaluative framework by which the worth of the theory might be determined. A non-utopian theory should have to prove itself in practice. Conceptions soon become conventional. It is offered then, that the model be regarded as an input into an open-ended curriculum theory. For, as King and Brownell (1966:138) have observed, a deficient theory tends to produce curriculum practice of "limited power and effect." A theory should be a system in which one could experiment, specify conditions and terms, plan for evaluation, and consider the many problems of logistic details as well as the central factor of teacher preparation. The output could then be observed in terms of the effectiveness of the theory in producing what it promised, implicitly or explicitly. It seems appropriate then, to offer the curriculum theorist using the schema some general suggestions concerning the task of translating the model to a theory of practice. What follows is a series of suggestions implying how theoretical conceptions of the language process would impose demands on the curriculum theorist in order to deploy these realistically, while remaining true to the model, in the school.

A summary of the more general principles and purposes underlying the sections to follow will be set out before starting the section on theoretical considerations and their ensuing implications.
The following general principles were generated from the study. They are substantiated by Fagan (1964) and Moffett (1966) whose postulates call for a more inclusive theory for an English curriculum, and for higher-order principles of language. Again, Cassirer was helpful for the concepts involving symbolization, while the conceptions of the language production process were generally subsumed from Polanyi and Vygotsky.

1. The use of language is essentially a social action that increasingly becomes internalized as private behavior. The quality of individual utterances depends on previously absorbed dialogues which become the models for later inner processes.

2. Conception and verbalization are inseparable. Thus, a course in language is essentially a course in thinking.

3. The student's basic need is to perceive how he uses language now, and how he might use it in the future. Thus, a student needs to be involved in perceiving how he and others function when they use language, and not in receiving information about fragmented tasks like memorizing vocabulary and spelling lists, analyzing sentence components, or reading for plot sequence only.

4. It follows then, that the material to be conceptualized and verbalized is that which is a product of the student's experience. Linguistic, literary and rhetorical analyses should be delayed until the student realizes that learning how to produce and receive language well is a lifetime pursuit.
5. Teachers become agents responsible for expanding the cognitive and verbal repertoires of students. The goal sought is a student competent in the production and reception of many types of discourse, vocabularies, sentence structures, and points of view.

6. The developmental sequence desired is one of progressing to fine discriminatory perceptions in the modes of discourse, from low to high abstractions, and from the personal to the impersonal.

7. English, like Greek or algebra, is a symbol system unlike other primarily empirical subjects as history or biology. Thus, English as a symbol system is not primarily about itself; it is more about other subjects. When a student masters a symbol system, he learns how to operate it. By means of such a system, a student thinks and communicates about other matters.

8. Mastery of a symbol system involves a curriculum design that allows students time to use the system in every realistic way possible, and minimizes the analysis of the system as an object.

**GENERAL CONSIDERATIONS AND THEIR IMPLICATIONS**

There follows a series of theoretical considerations, each with its ensuing implications for curriculum building and teaching practices in English, which have been developed in the elaboration of the model of the language process. It is from such considerations and implications that a curriculum theory of the language process must be drawn if it is to be rigorously grounded in an explicit theory-model. The more general considerations and their implications
will be discussed first, to be followed by a discussion of the more specific considerations and implications.

Symbol-making

The theory-model revealed symbol-making to be a required capacity for syntactic, purposive communication. Man, Cassirer (1944) has pointed out, as animal symbolicum, is like no other creature on this earth by nature of the symbolic networks which (1) constitute his cognitive field in its psychomotor, affective and cognitive aspects, and which, (2) through culture link him to his fellow man. These networks are the underlying structures of his physical, intellectual, aesthetic, and moral activities. They have permitted man to go beyond his physiological limitations and physical environments to both understand and create nonphysical systems of environments. Included here are the networks of the mass media; the disciplines of knowledge; literature and the arts; educational systems and technologies.

Implications. The following implications derive from the general conception of symbol-making:

1. Symbol-making and the ancillary functions of symbol reception and interpretation suggest that a curriculum theory of the language process recognize the importance of students becoming functional in the major symbolic systems—numerical, graphic, and linguistic.

2. To demonstrate the pervasiveness of symbol systems in culture and communication, the curriculum would include instruction in communication systems, the language of literature and allied art forms,
and the language of discourse in such a way that the result is not a splintering of instruction into isolated skills in the larger field of English. Rather, as Moffett (1966) argues, the purpose would be to recognize the holistic parameters of English as a structured discipline.

3. The boundaries of this broad view of the curriculum would be set by courses of study in communication systems, including the foundations of generative grammars, the biological foundations of language, and the developmental, psychological, philosophical, mathematical, historical, literary, and sociological aspects of language. These, of course, would be delayed until the upper secondary years. Included here would be units on sign languages, animal communication, gestures and proxemics, and the specialized language variations in such items as proverbs and advertising copy. Man’s efforts to surmount language barriers would be illustrated by exposure to Interlingua, Esperanto, Semantography, and international symbol systems.

4. The common theme of inquiry into the symbolic systems into which men translate their experience would have as a natural adjunct the study of world literature and world art and music. Also included would be models used in scientific explanations, as well as literary archetypes. The point is that the curriculum broadly suggested here would illustrate those symbolic extensions that men have created, as Frye (1963), (1964), has suggested to link themselves with others from different societies and cultures.
Synergism in the Language Process

The model of the language process pointed to synergism as a perspective whereby language was transformed from a substantive entity into a process by which men interpret and organize reality, and thus are able to deal with events. The transactional view of behavior which underlies the theories of Dewey (1933) and Mead (1934) holds that transactional processes are cooperative; that is, they are reciprocally beneficial and dynamic efforts to enhance the integrity of the whole. Continual reorganization is a constant in human behavior. Moreover, Snygg and Combs' conception of the phenomenological field (1949) is the representation to oneself of a series of possible transactional roles by which societal and individual organization are enhanced. Involved here is the entire social process that includes role playing and role taking. Within man's nonphysical environments which include the formal scholarly disciplines, literature, the arts, educational systems and technologies, the individual assumes one of a limited number of roles. At any given moment in time such roles are necessary to the total organization of the subsystem or community, be it intellectual, technological, or otherwise. The roles, in turn, are necessary to the stability of the larger national and international systems. Thus, both the social organization and the individual organization are enhanced.

Implications. The following implications are derived from the conception of synergism in the language process:
1. Synergetic functioning suggests that a curriculum theory of the language process provide for the study of those forms of discourse which range from private to public. The curriculum should also provide for practice in the production of such forms.

2. Such an array of discourse would fairly represent the patterns of growth from egocentrism to psychological decentering, a process discussed by Piaget (1954). The array would span discourse for self and discourse for others. The forms the discourse might take include diaries and journals as examples of discourse for self, and literary, rhetorical, and expository forms to represent discourse for others. Letters and autobiography might be used to represent "semipublic," yet still highly personal forms of discourse. This part of the curriculum would illustrate, and provide experience in doing, those processes by which men translate their experience to themselves and to others, using the medium of language: spoken, sung, dramatized, pantomimed, or written.

3. When selecting the types of discourse to be considered, two values should be adhered to. The first is that the discourse to be selected be public or private communications or literary works evidencing universal, rather than idiosyncratic, concern for the individual in society. The second is that the discourse be structured in some explicit or explicable form.

4. A more specific implication is that the study of forms of discourse and literature should focus on the role performed by the author of the work as narrator. In this study of the author's role,
all his points of view, biases, attitudes, and voices, as well as the roles he assigns to the characters and to his audience should be included.

5. In addition to inviting students to explore rhetorical roles in the study of discourse, the curriculum should encourage students to explore archetypal roles and situations in myths from around the world, epic narratives, and similar literature, which recur in work after work. As Bruner has pointed out (1959), the plights man copes with—birth, death, the passions—can provide an organizing principle by which knowledge of our human condition is transformed into a form (art or literature) which makes thinking possible, and by which we go beyond passive learning to the active use of knowledge.

6. A further development of synergism is the suggestion that a theory of curriculum and teaching would stress involving students in the selection and design of their own courses, as they assume the role of the educator, and would stress fostering an active rather than a passive learning environment, as the students cooperate in the venture.

7. Finally, the conception of synergism points to the importance of instruction in creative dramatics, for students would be provided with opportunities to take the role of the other (in Mead's transactional view), and experience simulations of new situations and emotions.
Language Learning

The model described the covert trials in the process of developing and organizing purposive acts. The trials included the elements involved in making the transition from intrapersonal to interpersonal communication: knowing-what-to-say, knowing-how-to-say-it, and knowing-to-whom-to-say-it. As the model averred, more than the mere stringing together of phonemes and morphemes is required to reflect the total social and personal dimensions of the language event. Individuals learn language from successive focal awarenesses of events in the environing symbolic system. These perceptions, however, occur against a background of subsidiary awareness consisting of integrated prior experiences, contexts, and peripheral features of the immediate situation. According to Polanyi's theory of personal knowledge (1958), the individual exhibits two significant modes of apprehending aspects of the world. Instrumental knowledge is useful for immediate practical ends, while the subsequent articulate knowledge is useful for more sophisticated and more remote ends. Piaget (1954) explores an added facet. With cognitive development, the individual moves from a relatively narrow perceptual state in which external experience and self-awareness are barely distinguishable towards a state characterized by perceptual expansion and increasing differentiation between the self and the other.
Implications. The implications of the specific consideration of language learning are as follows:

1. The basic ways by which children begin to learn to produce and receive language include dramatic play and interplay, writing for meaningful purposes and audiences, small-group discussion, and responding actively to the writing of others.

2. The underlying structure in all such activities is essentially a group process which engages the child with language and lets him learn about it by sociality. The group process exposes the child to receiving and giving feedback, responding to responses in increasingly more adequate ways, and in using language and discovering the results of such use. Thus, the process stresses the social origin and function of language while fostering independence and initiative as students begin to educate themselves and each other.

3. Language learning also suggests that for humans an enriched environment is a language environment. Students should have every opportunity for active encounters with language in its written and spoken forms. This suggests that students be encouraged to explore a wide variety of human communication systems (American Sign Language of the Deaf, international languages and symbols, etc.) as well as the nonlinguistic symbols that are the currency of their culture and of other cultures: religious, technological, academic, and commercial. Included here might be engineering and traffic symbol systems; ideographic, syllabic, and alphabetic writing systems; mathematical and musical notations; flow charts, graphs, and
topology in geometry; astrological and astronomical symbols; the
Chinese Ying and Yang symbolism; the color symbolism in various
cultures. Emphasis would be primarily on those which evidence
systematicity; that is, those systems made up of intercombinable
parts operating according to specifiable rules which generate a
variety of messages.

4. Implied here also is that the curriculum theorist would be
required to devise approaches by which the subsidiary awareness or
prior learning of the student might be appreciated and accounted for
in the teaching situation. This would involve helping the student
relate his previous understandings to new ones. The progression is
one by which the curriculum acquaints students, as both readers and
writers, with all forms of written discourse, while extending their
oral discourse onto the written page. A whole spectrum is unfolded:
invention and documentation, literature and nonliterature, dialogue
and monologue, private utterance and impersonal accounts.

5. Suggested also is that the teaching of second languages
be carried out in environments which, as much as possible, simulate
the normal situations and processes of those speakers who have mastery
of the major dialects of those languages.

Generating Language

Individuals learn to generate language from rule-governed
cognitive models which are developed with the aid of social and
intellectual interactions. Such models constantly undergo reorganiza-
tion with each written production, interpersonal transaction, or
covert rehearsal which requires great effort and/or the elucidation of some pattern. The model in the previous Chapter emphasized how indicators of self and other(s) are expressed once language is generated. Involved here were also the configuration of ideas constituting self-concept and the processes that constitute the generalized other. Apart from these considerations, the research showed that language growth is continuous. When the child moves from egocentric speech to communicative speech he has decentered—he is more successful at taking the other person's point of view and communicating with him. This is what Piaget (1954) calls the stage of concrete operations. It supersedes an earlier stage in which the child, lacking the structure by which to assimilate and adapt to the world, committed systematic errors as a result of cognitive egocentrism. Vygotsky (1962) suggests that egocentric thought and speech, which are autistic, nonverbal and charged with sensuous and semantic meanings, are transformed through inner speech and thought (thinking in words) before eventually appearing as socialized speech. Brown and Berko (1960) found that comprehension competence appears in advance of production competence; the child has the entire phonetic representation of a word in his mind before he utters it.

**Implications.** The following are the implications derived from the conception of generating language:

1. The conception of generative models suggests that a curriculum theory based on the language process has two major responsibilities: (a) to provide broad and varied opportunities
for language performance, and (b) to devise instructional means for an exploration of the modes of inquiry which characterize the study of language systems, discourse and literature.

2. The focus on inquiry is a shift from the more conventional study of content to learning how to learn in a particular discipline. In the study of a discipline, the content cannot be organized in any final way. In an active discipline, the facts are not all in; until they are, the discipline consists mainly of hypotheses to account for present facts. The more adequate the hypotheses, the more they can also account for any knowledge to come. Thus, the learning which seems of worth is the learning of the way a particular kind of knowledge is made.

3. In the process of generating language then, some aspects of inquiry worth exploring are: the various perspectives from which the domain is typically viewed, the paradigms characteristically applied to problems, the current hypotheses which define the field, and the techniques for analyzing, ordering and displaying data. A student actively involved in inquiry and in reporting his findings receives a far more generalizable education than does the passive note-taker.

4. The model that the native speaker has of his language is an appropriate topic of inquiry for the student of language. In addition to the value of having a student discover the extent and complexity of his achievement in having learned a language, inquiry into generative grammar offers insights into the universality of the deep structures of languages. Useful performances for the
student wishing evidence of his generative model include practice in paraphrasing and sentence combining. The approach to grasping sentence structures and their ensuing manipulation is a pragmatic rather than an academic one. Instead of learning grammatical classifications and analyzing given sentences, children expand, reduce or otherwise alter their own sentences and those of others. By means of this constant correcting they improve communication and expression.

5. This conception also suggests that the languages of discourse and literature should be represented in the curriculum, both as the vehicle of performance and as the subject of inquiry. Whereas the generative model for ordinary language is to be found in grammar, there are at least two models for discourse: (a) the communication model, and (b) the postulates of logic. Similarly, there appear to be other generative models for language in literature: like Langer's (1951) theory of art (presentational forms), and Jung's theory of the psychology of the unconscious. Although the models have not as yet been integrated, it is possible to suggest curricular applications even in the absence of integration.

6. Language performance in the mode of discourse should grow naturally out of the tasks at hand: the need to keep a journal, to compose a letter, to organize information, to draw inferences, and to share one's findings with others. Students would thus have the opportunity to experiment with various roles while also following a sequence of performances corresponding roughly to stages in their cognitive growth.
7. In literature, the inquiry and the performance would become practically indistinguishable, particularly in the elementary school years. Implicit in this conception is a curriculum design which would build on student responses to literary works. The curriculum would have to concern itself with suitable arrangements of works and their introduction so that a progression to more sophisticated responses is established: from visceral like or dislike to a more accomplished appreciation of the writer's skill. Student response would be displayed in student performance: a skit, a painting, sculpture, story or poem created in response to a reading of a work. In such a curriculum, study of the external trappings of literature: literary history, biography, and criticism would be deferred until the later years of school. Only when students had attained some basic appreciation of the art form and its skills, would they attempt to relate a number of works historically, nationally, or critically.

**Subsystems of Representation**

Cognitive models are comprised of subsystems, each reflecting aspects of the cognitive field. For example, there are Bruner's (1966) symbolic, iconic, and enactive modes by which experience may be represented to correspond respectively to the planning of experiential encounters whereby the student is taught about the domain,
how to work in it, and how to appreciate it. Representations further subsume the contexts to which they are appropriate. Two of these are the metaphoric and the literal contexts which govern usage. The model of the language event pointed out that a key element in the conception of the language process was the interpretation of the metaphoric speech act as a bridge between two different orders of language, the formal and the experiential. Metaphorizing permits the expression of ideas never expressed before. Such a novel use of language and its contexts recalls Polanyi's domain of sophistication (1958). Richards' concept of "metaphorizing" (1965) referred to an act involving an individual's cognitive, conative, and affective processes to represent concrescences of meanings not explicit in the terms themselves.

Implications. The following implications derive from the conception of subsystems of representation:

1. The conception of subsystems of representation deals basically with the problem of meaning and interpretation. The conception suggests arrangements of material in such a way that differences between figurative and literal meanings were clearly illustrated.

2. In language study, an appropriate inquiry would be the relations of form to meaning--arbitrary, symbolic, or onomatopoeic.

3. Also implied by this conception is the eventual study of the histories of languages (their etymologies, linguistic changes, and membership in the families of languages) and of the actual social
variations and uses in casual peer conversations, job interviews, journalese, etc.

4. The curriculum designer would have the task of developing encounters for the study of and practice in metaphorization. He would stress the contrast between metaphoric (compact or subsumed meaning) and discursive ("spelled-out," or the implicit made explicit) modes of apprehending. Students might observe instances in which a symbol, logo or trademark is associated with particular commercial or governmental enterprises; then, they would be asked to extrapolate in discursive form what the image implies about the organization. Attempts might also be made to paraphrase poetry, and to make explicit that which may have been lost in the paraphrase.

5. A curriculum theory of the language process would also have the task of providing ways by which the stream of speech could be observed and discussed. When the nature of education is conceived as a continuing dialogue, opportunities for studying interpersonal communication are possible in the classroom. Means of drawing attention to the nature of the act being performed in the saying, as Austin has observed (1962), is a possible approach.

Sentence Expansion and Modification

Language production is a dynamic process in which the stream of speech or writing moves from a semiverbal representation or model of the meaning of the utterance (metaphoric context) into an expanded explication (literal context). A detailed utterance is, in effect, the definition of one's covert responses. Mead's phrase "vocal
gesture" or inner speech (1934), is used to designate an initial covert response toward the expected acts of others when the speaker can rehearse in himself the response to that gesture intended to be called out in the other. Otherwise, one would not know what he was saying as he spoke. The meaning or content of an utterance is modified as it is explicated; hence, modification and reservation are part of the process of making meaning literal. Again, one of the subsumed bases for the model concerned itself with the role meatphorization has in coupling fixed meanings and shared concepts with personal, unqualified apprehensions of reality.

Implications. The implications of sentence expansion and modification are discussed below:

1. Sentence expansion and modification suggests the preparation of suitable materials for the study of sentences, paragraphs, and complete compositions. At the level of the sentence the study would be in terms of predication, nominalization and modification. At the level of larger units, the emphasis would be on the processes of organizing and displaying information, of stating the topic, of expansion, delimitation, sentence combining, drawing inferences, and the like. In their workshops students would join and disjoin sentences, experiment with variant constructions, reword phrases, and would generally focus on the practical business of exploring language alternatives.

2. The curriculum would pay particular attention to the progression of statements from relative undifferentiation to
Increasing differentiation, and to the use of words or phrases functioning in highly specialized ways.

**Language Performance**

Skill in using language is developed in stages; that is, in concrescences of symbolic, affective, and psychomotor reorganizations as evidenced in the work of Piaget (1954), Polanyi (1958), Vygotsky (1962), Weir (1962), Brown and Berko (1960), Brown and Fraser (1964) and others. Moreover, the model of the language event presented in the previous Chapter clearly indicated how covert rehearsal leads to alternative suitable responses to the making of choices from among alternatives. There follow the overt and covert practice and experimentation with the competencies achieved to lead to novelty. That is, man's covert rehearsals, facilitated by symbols and role taking, allow him to anticipate the consequences of his actions, thus giving him control over them. In this fashion, man develops his potential capacities to reflect and act intelligently, and to extend his activities far beyond his bodily confines.

**Implications.** The implications of language performance are as follows:

1. A curriculum theory would be required to establish general appreciative procedures by which degrees of sophistication in language performance might be indicated. In this respect, the small-group process of interacting and feeding back is essential, as is the
variety of tasks the teacher proposes to allow the learner to expand gradually both verbal and cognitive capacities in all aspects of discourse.

2. Also implied here is the assessment of performances in terms of skill in taking the role of the other, while extending the bare kernel sentences to produce utterances and sentences that are increasingly more sophisticated in content and structure.

Language Brings Minds Together

The model of the language event revealed the basic connection made between participants in such an event when their cognitive maps of the environment had correct information, so that the intrapersonal language event became a rational, social affair. The logical end-result of a language event is the elucidation of meaning as mind apprehends mind through the perception of the networks of interconnectedness among persons, the physical world, and symbolic human environments. There is also the added dimension of "cooperative" symbolic activity; that is, cognitive models become roles when they move into the social and affective domains. Moreover, language events evoke response and bring about the reorganization of the roles taken by the participants involved. To be stressed here is the readjustment of participants' roles as they progress from sensory experience to the creation and appreciation of nonphysical human environments.
Implications. The implications of how language brings minds together are discussed below:

1. When taking into consideration the conception of "meaning" the implication is that the curriculum theory would need to take into account not only the possible internalized roles governing students' behavior, but also the relevance of the particular aspect of knowledge with which they would be confronted.

2. A consequent implication is that the theorist would be obliged to formulate a notion of what constitutes "relevance" in terms of symbolic human environments. One application that follows from this conception is to invite students to explore the growth and development of thought and language in the human organism to appreciate the fact that one mind may apprehend the mind of another. The effect of language on the history of mankind, over the lower orders of life, has made cooperative behavior possible.

3. Finally, curriculum design ought to draw students' attention to instances of role-reorganization in conversation, drama, and stories. Pertinent questioning would bring forth the observation that the protagonists had changed in some manner between the beginning and the end as a consequence of their interaction.

Extensions of Man

The language process is a continuous extension of man's cognitive field. This principle is derived from Snygg and Combs' (1949) conception of the phenomenological field as no more and no less than the representation to oneself of a series of possible social
roles. The major aspects of the field are manifested in man's symbolic, manipulative, cognitive, and affective activities. Its purpose, as the model of the language event pointed out, is the exploration, for the self, of the self, other selves, and the world. In the domain of the intellect, language is the principal instrument for seeking and finding, for knowing and producing knowledge, and ultimately for the discovery of meaning.

Implications. There follow the implications derived from the conception of extensions of man:

1. In general terms, the last consideration suggests that the curriculum theorist ought to design a curriculum which would invite students to explore the means by which man has devised extensions of his organism, that is, the specialization of functions. For example, telescopes and radio-telescopy are extensions of the eye, vehicles extend the feet, language bridges space and time, and literature and art allow man to enter the private, the unconscious, the ideal, and the unreal.

2. The curriculum should also guide students to become aware of the special languages and paradigms that linguists and literary scholars use to manipulate and categorize particular aspects of the world of the striving disciplines, and how these, in turn, affect our perception of the world.

Throughout the elaboration of the implications, it has been offered that the language process curriculum theory account for three basic modes of approaching the encounters: (a) teaching the student
about the domain; (b) teaching the student how to work in it; (c)
teaching the student to appreciate it through exposure to the domain.
As pointed out previously, Bruner suggests that these approaches
 correspond to the symbolic, enactive, and iconic modes of apprehending
and representing experience. These have implications not only for
individual growth and the sequence of encounters, but also for a theory
of teaching:

1. In the symbolic mode, a teacher would provide continuing
contacts with works of criticism, history, linguistic scholarship,
and other exemplars of perspectives from which particular problems in
knowledge may be viewed productively in the upper secondary grades.

2. In the enactive mode or in learning a skill, a tutor-
learning interaction is suggested during which much of the teaching
would occur through example and response.

3. In the iconic mode, the teaching of appreciation seems
possible through broad exposure to a variety of representative
artifacts, combined with practice in making or writing under the
guidance of an artist or author in residence. As the curriculum
theorist proceeded to evolve a plan of encounters, furthermore, he
would be providing for the validation of the theory-model, for through
the evaluation of the practices, he would be ultimately determining
the worth of the theory.

The purpose of the concluding Chapters has been to offer a
means by which the original problem of the first Chapter could be
resolved. In the first place, the theoretical conceptions of the
schema have suggested a way of conceiving language study which
stresses that the quest for knowledge is more important than the passive learning of content. Secondly, language study thus conceived permits the simultaneous description of the operations of speaker and learner. In the third place, it provides a manner of viewing the human capacities for language as virtually unlimited under normal conditions. Fourthly, it assures the relevance of learning about and an appreciation for language. Finally, the conception of language study rendered here suggests a means for increasing the sophistication of language performance.
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