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Towards An Interactional Theory Of Educational Therapy

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TOWARDS AN INTERACTIONAL THEORY OF EDUCATIONAL THERAPY

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TOWARD AN INTERACTIONAL THEORY OF EDUCATIONAL THERAPY

Abstract of Dissertation

PROBLEM: The development and presentation of theoretical assumptions about the interactional aspects of educational therapy for the severely dysfunctional pupil.

PURPOSES: To provide a conceptual framework for the study of educational therapy as practiced and to develop a baseline for further research into psycho-educational strategies and their outcome.

METHOD: An examination of systems and communications theory literature for models applicable to the educational-therapist-pupil dyad and of the use of field observations of educational therapists' behaviors.

FINDINGS: An application of communications theory models and observations of educational therapist teaching behaviors seem to suggest the following theoretical assumptions: Initial, or first order learning, involves the establishment and sustaining of attention, perceptual and cognitive efficiency, and autonomous self-awareness. Such initial learning occurs as the educational therapist sends congruent and clear signals about the subject of discourse as well as about relationship aspects of this information. Explicit statements of roles and rules provide such relationship messages. These are both verbal and non-verbal and carry specific kinesic aspects.

FUTURE APPLICATION: Further studies of both context and communication components among a variety of congruent and non-congruent communication components among a variety of interactions and among a variety of subjects are needed further for the development of effective and replicable educational strategies.

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FOREWORD

This study has been a long time in developing. Its implicit roots are found in the basic and probably unanswerable question: "What is learning?" and its explicit roots in the quest to understand and record those changes in pupil behavior that appear within the interactional context of educational therapy. As a clearer understanding of the nature of the psycho-educational transaction would not only facilitate psycho-educational management but also contribute a measure to our understanding of learning, this investigation is concerned with an attempt to conceptualize this psycho-educational transaction.

The poet Novalis (1967) once said: "Theories are nets: only he who casts will catch!" Yet we know, of course, that many casts are empty. This study represents an attempt to land an initial catch in the hope for further journeys into these territories.

The epistemologist K. Popper (1961) describes three approaches used for scientific discovery,all of them beyond the method of experimental probability. These methods are: The historical method or an examination of what other people have thought and said about a problem; an examination of the "growth of knowledge", or"common-sense-knowledge writ large", which uses "rational reconstruction of observable phenomena"; and thirdly, a rational discussion, or critical examination of data. These three approaches are used to develop a theory of educational therapy.

The cultural anthropologist Jules Henry (1965) comments on this observational approach:

> **It is a commonplace of scientific history that the first valuable hypotheses are developed out of good observations of natural-occurring phenomena. In my research I assumed that the study of 'h u m a n' psychology - - as distinguished from that of pidgeons, rats, mice, and sundry other lower animals -- is merely beginning and can profit from naturalistic observation: observation of human beings in their native habitat. There is a great dearth of such material but an enormous amount of premature theorizing based on studies of highly artificial laboratory set-ups or even worse extrapolation from experimentally controlled behavior of lower animals... (p. XVI)**

Observations of interactional behaviors in educational therapy encounters are also embedded in such a configurational context, and like patterns are lifted out from their temporal matrix. The purpose of these observations is the discovery of some prevalent patterns rather than of linear causal chains. Consequently, the resultant theory about the nature of educational therapy serves to present such behavioral configurations. A greater understanding of these configurations or of what kinds of behaviors are involved in the psycho-educational encounter is needed to determine precise strategies for educational therapy. This study represents only a beginning step in this development.

Personal encounters as a student with K. Bühler, E. C. Tolman, J. C. Flugel, Erik Erikson, Egon Brunswik, Virginia Satir, and years of encounters with many practicing educational therapists and the written works of many thoughtful students of animal and human behavior provided the background for this endeavour. Faculty and colleagues at the University of the Pacific and U.C. Davis gave much time and support to this effort and I thank them.

CHAPTER 1

INTRODUCTION

INTRODUCTION

Although educational therapy has long been practiced in an intuitive manner even before Ann Sullivan's well documented approach to Helen Keller's dysfunction, a body of theory necessary for the elaboration of replicable prescriptive methods is still lacking, and must be developed.

From an examination of the literature and from field observations made since 1960, a formulation of theoretical assumptions about the active ingredients of educational therapy for the severely dysfunctional pupil may be derived. The generation of effective and replicable strategies awaits such working assumptions. The interaction between the educational therapist and severely dysfunctional pupils was selected as the vantage point from which to gain such an understanding of the flow of information or, in other words, of the process of teaching and learning within this dyad. The presentation of such theoretical assumptions about an interactional model is the topic of this dissertation.

STATEMENT OF PROBLEM

Based on an analysis of the literature and on field observations, this study is concerned with the severely dysfunctional pupil and is designed to generate and present theoretical assumptions about the interactional aspects of the educational therapist-pupil relationship. Such assumptions are presently lacking but are necessary to provide a framework for further research and practice of educational therapy for the severely dysfunctional pupil.

PURPOSE OF THE STUDY AND DEFINITION OF TERMS

The purpose of this investigation is to provide a theoretical base for the study of educational therapy as currently practiced and for the further development of specific psycho-educational interventions with severely dysfunctional pupils. These are children with severe information-processing deficits in attention, perception and cognition, showing profound ego-dysfunction. These children operate at such a low level of information-processing that they first must learn to learn or master "first order learning" (Morse, 1958) rather than learn to learn something through 'second order learning'. These pupils are deficient in "first order learning" or in the skills of "accepting" and integrating basic information commensurate with culture-and age-appropriate demands.

The concept of "first order learning" as used in this study involves those basic information-processing tasks which are necessary for the child to be in consensual relation; or, stated differently, to enable the child to receive and process teaching messages. These first order learning skills comprise the sensori-motor and pre-operational learning stages of Piaget (1970) and are perhaps most clearly described in educational terms by Hewett (1969) in his terms "attention", "response", "order" and "exploration" as stated in his hierarchy of educational goals. The end-point of such "first order learning" is the pupil's self-awareness and personal autonomy which allows him to proceed to what Hewett (1969) calls"mastery" and "achievement" or 'second order learning' which covers the more traditional functions of our educational system. While the teacher-learner transactions in the realm

of the traditional or second order learning tasks have been fully described, the interactions involved in teaching these 'first order' learning tasks need further exploration.

The educational therapist whose intrinsic role and function is here examined in an interactional context, is a pedagogue charged with the education of the severely dysfunctional pupil. Within this assignment the educational therapist has the mandate to facilitate the pupil's learning; this mandate involves the child's communication skills and knowledge of the world around him (Riese, 1964) and his performance of age-specific learning tasks (Hewett, 1969). An analysis of how such a mandate was carried out by a number of successful educational therapists provides the basis for further assumptions.

The interactional framework used in this investigation is based on Ruesch's (1954) formulation that interactions are based on "mutually perceived expressive acts" which by having been perceived "change human behavior" or, stated in Watzlawick's (1967) terms, this framework deals with the "behavioral effects" of communication.

In this study the interactional bases of educational therapist behaviors are reviewed in the literature and are also lifted out from those observations of educational-therapist-pupil interactions which appeared unique to this special relationship. The apparent purpose and process of these communications stated as theoretical assumptions is later described to make replication and further study possible. Such a theoretical foundation is needed to further the development of effective teaching strategies.

LIMITS OF INVESTIGATION

The population observed in this study consists of severely dysfunctional young children, ages three through eight, living in essentially intact homes with college-educated parents, whose overt child-rearing goals and values are protective and growth enhancing and whose life-styles involve gratification-delay and success-seeking. Applications of findings must be limited to the development of educational strategies for populations with characteristics similar to the one on whom the initial observations were made, and to dyadic educational interactions.

BACKGROUND OF PROBLEM

The specific teaching behaviors of educational therapists involved in facilitating 'first order learning' in severely dysfunctional pupils have not been adequately described. Such a description requires an analysis of both product and process, function and purpose. While authors such as Bettelheim (1967), Riese (1962) and Morse (1958) who work with severely dysfunctional pupils describe the function of their therapeutic teachers as being different from that of either their child psychotherapists or regular teachers, they fail to define the specifics of such differences. However, it appears from their reporting that the goals of learning tasks for these severely dysfunctional pupils differ from those of more 'normal' pupils, as the former lack the basic behavioral organization necessary to benefit from more traditional instructional processes.

These basic learning behaviors, necessary for beginning formal instruction, were termed "first order learning" by Morse (1958). The developmentally atypical child, although often of average or superior aptitude in certain other learning capacities, seems to lack skills basic to learning in attending, perceiving and thinking. The process by which educational therapists seem to elicit such learning skills is as yet unknown; however, as it may be assumed that such a process would be embedded in the therapist-child communication, differences in his communication style from that of a child therapist or remedial or regular teacher must be looked for.

Therefore, a study of educational therapist-pupil communication is undertaken, aimed at the identification of certain characteristics which may account for the observed behavioral affects.

The following investigation is concerned with the interactional context of educational therapy, an aspect which appears as yet unexamined. Messages about objects and events, as well as synchronous relationship aspects of these messages will be studied (Watzlawick, 1967).

Such an interactional model of the educational therapist-pupil relationship may be viewed in various perspectives, such as the early attachment dyad (Bowlby, 1972), phenomenological sociology (Goffman, 1959) cultural transmission (Kluckhohn, 1962) or ego psychology (Ekstein, 1960). Configurations or patterns emerging from such descriptions provide the building blocks for the theoretical assumptions stated later. Scheflen, (1973, p.19) in his investigation of the "meaning" of behavior states:

> We will directly observe the various elements of linguistic-kinesic behaviors in the various contexts in which they regularly occur, thus observing the relation of small elements of visible and audible behavior to large units of patterns or event systems of behavior.

Within the educational therapist-pupil interaction, educational-therapist-originated messages may be examined for patterns with both "command" (Watzlawick, 1967) and "steering" (Weiner, 1954) aspects. The intent of such actions may differ from the action as 'performed', but both intent and performance must be considered in the behavioral analysis of individual and social behaviors (Weiner, 1954). The discovery of such models of intended action refers to the purpose or function or 'meant-to-be' aspects of events; the 'performed' action refers

to its structural, 'as is', or product and process qualities. In other words, both intent and effect must be considered since the message sent and the message received are not identical. (Ruesch, 1956)

Riese (1962) and Bettelheim (1964) describe some of these behavioral events of their therapeutic educational program and suggest that their educational therapists focus on the reality shared with their pupils, using continuous reality testing and reality integration. This focus on a mutually shared world as the major area of discourse appears to be different from the traditional focus of either teaching or psychotherapy since the educational therapy discourse mainly concerns ways of being in this world. Thus, while the 'teacher' may provide discourse about that which is distant in space and time, or the psychotherapist about the images of man, the educational therapist seems to act as a facilitator or information-processing agent in a shared environment with a predominantly perceptual and cognitive orientation.

This study attempts to define this role of the educational therapist as a facilitator of learning in and about the shared perceptual and cognitive world. However, since what is observed, how it is observed and how it is described, is inevitably governed by the observer's premises, such premises will be presented in the following section.

PREMISES

As all description is based on implicit classification or enumeration, the criteria leading to the inclusion or exclusion or to a "go or no-go" of phenomena (Lorge, 1951) must be stated.

Information concerning the observable events of educational therapy could be viewed in various ways. The major available options, stated in general terms, would be:

1. a description of the observable learning behavior in terms of external stimulus and response.

2. a description of events in internal terms, using intrapsychic or motivational concepts, or

3. a description of the interactional behavior with a focus on communication processes.

This last approach has been chosen for this study, prompted by the usefulness of this interpersonal model in the research of and application to other dyadic relationships and in the expectation that such a focus on communication could also provide information directly applicable to communication behaviors. This interpersonal approach rests on a belief in a biological basis of organismic survival through an ability to receive and utilize signals (Bateson, 1972) and at the same time deals with the characteristics of human communication (Watzlawick, 1967) to provide a model for the analysis of the process of such informational systems.

The learning theory model utilized in this study derives from Tolman's molar behavioral approach (1945) as elaborated in Newell and Simon's (1961) information-processing model. Both Tolman and Newell

and Simon utilize the intrapsychic motivational approach of ego psychology as one of their intervening variables and look at behavior in large or 'molar' units. Thus the major premise, governing the observations of behavioral events and the review of literature may be stated as follows: An examination of the communication processes occurring in the dyadic relation between pupil and educational therapist may be assumed to contain that which effects changes in learning behaviors in the pupil.

The following minor premises link learning theory and information theory with developmental psychodynamics:

1. Experience and consciousness is based on signals (Ogden, 1923; Henry, 1965).

2. Learning is adaptation and implies "the capacity and process of the adjustment of living material to itself, to other living material and to its external physical environment" (Leake, 1964) and is based on information mediated by signal, metaphor or symbol (Bruner, 1962).

3. The child's maturation is based on a whole sequence of expectable environments mediated by significant others (Erikson, 1968).

Based on these premises, an examination of communication patterns peculiar to the educational therapist-pupil dyad may increase the understanding of that 'event system' labelled 'educational therapy' for the severely dysfunctional pupil.

SUMMARY

The desirability of the presentation of an interactional model of educational therapy and the purpose and background of such a study has been discussed. The methodology for this study is presented in Chapter 2.

CHAPTER 2

METHODOLOGY

INTRODUCTION

Traditionally, a discussion of methodology follows the review of literature; this order is intentionally reversed, since the issue of methodology affects both the focus and the selection of literature.

Since this study is concerned with the development of theoretical assumptions based both on a review of literature and on idiographic observational data, the rationale for such an approach will be discussed in this Chapter. Therefore, a discussion of the employment of retroductive reasoning and the constraints used in the selection of literature is followed by a discussion of the observational methods employed, describing their focus, the mode of selection and the encoding of events. A discussion of methodological issues in the generation of theoretical assumptions and models completes this section. As this investigation primarily deals with the development of theory rather than with observational research itself, the details concerned with the actual data collection are reported in Chapter 4 with these observations.

'RETRODUCTIVE' REASONING

The use of existing literature and observational data in the generation of theory is extensively discussed by Polanyi (1959), Popper (1961), Whitehead(1964), and Peterfreund (1971). The internal consistency between literature data and naturalistic observation is seen as the fulcrum for the generation of further knowledge. This occurs as new data found to reach beyond the already known, are categorized and lead to a "reconstruction "(Polani, 1959) of observed phenomena. Such reconstruction using the logic of so-called "retroductive reasoning" (Hanson, 1958) generates theories or models of the observed events. Peterfreund (1971) describes such empirical models in the behavioral and psychological sciences as follows:

> It is extremely useful, though somewhat artificial, to distinguish empirical laws or generalizations from theoretical laws. The former are found in all natural sciences, but are characteristic of young sciences in the 'natural history' phase of observing, describing and classifying. They are generalities that are closer to the data of observation or the data of immediate experience. [p. 25]

Such initial empirical theories are largely generated retrospectively, as previously made observations are re-coded in light of the newly constructed models. The logical process here employed is best described in N.R. Hanson's terms as "retroductive reasoning". According to Hanson (1958), retroductive reasoning generates hypotheses from "surprising phenomena" encountered by the social scientist. Not unlike the poet Novalis, (1967) Hanson, too, refers to hypotheses as being "caught" within the rational context of a logic of inference. The assumptions to be stated later, were also 'caught' from observations made of

behaviors observed within the educational therapist-pupil transaction. Such observations, as unexpected data or "surprising phenomena", surface from the background noise of habitually observed and previously unnoticed events.

These observations of the educational therapist-pupil transaction over time, generated data in search of hypotheses in the manner in which such "common sense knowledge" calls upon "scientific knowledge" to discover patterns.

Popper (1961), in discussing theory building, suggests that the roots of scientific discovery are in the growth of common sense knowledge which is validated by historical knowledge; in fact, he refers to scientific discovery as "common-sense knowledge writ large" [p. 18]. Such common sense knowledge must be followed by a historical search of the pertinent literature.

SELECTION OF LITERATURE

Since a historical review is a necessary part of the process of building theory from the observation of "surprising phenomena", the method for the selection of pertinent areas from the vast expanses of literature must be recorded. In this study, this selection was governed by the premises for this investigation as stated in Chapter 1. These premises, in summary, refer to the assumption that behavioral changes occur in a framework of adaptive adjustments within an individual context and are activated through signal transformations. Therefore, the literature describing the function, process and effects of communication was surveyed to provide the basic behavioral pradigms for this study.

SELECTION AND ENCODING OF OBSERVATIONS

The theoretical assumptions presented in this study were derived from observations. They are later used in building a model of the patterns of events occurring under the label 'educational therapy'. These events were discovered accidentally at first and were later further pursued in a descriptive and observational search leading to the development of empirical theory from field observations as follows:

> It is a commonplace of scientific history that the first valuable hypotheses are developed out of good observations of natural occurring phenomena. [Henry (1965)p.XV]

Choice of Focus

As the stated purpose of this investigation is to develop a theory based on interaction,the focus of observation was on interactional behaviors. Both the structure and process of such interaction had to be considered. Ruesch, cited below, suggests that in communication research the study of structure serves to reduce the inter-relation of many events into simpler units, while a study of process is concerned with change over time.

> **Both structure and process indicate methods by which the scientist handles information. In assessing the structure of things, an observer reduces numerous observations to a few statements which would indicate the relationship of these multiple factors at any one moment. The purpose of a structural statement is therefore to combine as many features as possible into one unit whereby changes in time are neglected. Conversely, in statement of process the scientist tries to observe evolution in time...;**

> Varying his interest in structural or processal assesment of events the scientist will choose the dimensions of his universe. Structure description permits the inclusion of many factors because changes in time are neglected; on the other hand, the consideration of processes demands a smaller delimination because so many repeat observations have to be carried out. [Ruesch, 1951, p. 60]

The intial effort of this investigation is directed at structural relationships.

Selection of Events

The observed events could be described in many ways. Their potential inter-relationships are as numerous as their possible contexts. Yet, as in any scientific endeavour, a finite and specific selection of contexts in terms of time and relationships is necessary, so that the events under observation can provide a usable framework. This freezing of fluid events into the constraints of narrow bands of time and relationship patterns is a pre-requisite for the scientific study of observable events. This constraint is very well stated by Harold Lasswell (1959, p.89).

> An item of descriptive knoweldge may bear significantly upon the life of man. Nevertheless, is it too much to expect that a finite intelligence is capable of enclosing past and future within a single vision and of validly estimating the importance of every detail for the whole of human experience.

Among the many possible 'visions' only the interactional aspects of the educational-therapist-originating steering messages were chosen for examination. Time here is that of "present focus" Johnson (1957) so that these events are recorded as pattern or circuits in a here and now. Because the language of cause and effect is inapplicable to represent feedback loop phenomena such as those constituting dyadic communication,

the educational therapist's opening or 'conversational gambit' is used in this study as the beginning point for each sequence. This is an arbitrary but necessary choice for no true beginning or ending exists in a non-linear system; yet beginning points are necessary for observation and representation in our linear language.

Wolman (1970) in his "Search for a Philosophy of Science in Psychology" calls for the further development of a Lewinian type field theory to represent synchronous and inter-related phenomena such as feed-back relationships. Steward Brand (1973, p.14) in his "Meditations on Gregory Bateson" describes such relationship circuits as "dynamic networks of influence" which may be traced in part but can never be truly isolated.

> It sound as if it can include cycles of interactive learning (student teaches the teacher to teach the student better), of material (flesh to ashes to flesh), of slow recurrence (every so often an ice age stresses the system), of standard feed-back (the chilled body shivers until warmer), and of observer interference (the watched porpoise bedevils its observer).

Encoding of Events

Therefore, the events selected for observation in this study are described in a uni-directional manner assuming an arbitrary beginning point, namely the educational therapist's gambit. For strictly practical purposes, these observations were also treated at the same time as if the therapist-pupil interaction were a system by itself instead of being a part of a number of complex socio-cultural systems. Such over-simplification of temporal and social relationships is necessary at the outset of behavioral studies. A study of the wider time and systems relationships can gradually follow such an initial study of basic patterns.

GENERALIZATION

The "Surprising Phenomenon"

Baseline data were obtained from a very limited population, and constitute 'single' or 'unique' events having provided what Hanson (1958) calls the "Surprising Phenomenon" or single events rather than serial re-occurences. Such a surprising phenomenon serves to alert the observer's investigative curiously and speculative motivation.

This idiographic approach, using the single case or single cases as bases for even theoretical speculation has been in some disrepute in certain sections of American behavioral science. Yet, the use of the single case to provide working hypotheses and to develop hunches about the underlying relationships has been successfuly used and accepted in German, Swiss, and Russian psychology. Such cases have at times highlighted the existence of phenomena which would have been missed in the press of multiple cases and the seduction to find data that can be immediately and widely generalized. Luria's Man With The Shattered World (1972) represents an unexcelled example; the use of such single case material must, of course, reflect the uniquess of the initial data. Generalizations from such data require a clear labelling of the baseline data utilized; it is desirable that they be followed by a continued search for validating as well as for disqualifying observations.

Generation of Models

The generation of theoretical assumptions rests on "simple" or field observation (Webb, 1970) of events. The use of such field observation, of course, entails many vicissitudes (Campbell, 1958).

Campbell, in his discussion of pitfalls of communication research, states a number of specific cautions to be heeded in the use of observational data. The factors which appear especially salient here are those that involve the reductive coding of data into predetermined categories. The fact that the data were collected by a single observer increases the danger of such reductive coding. However, paradoxically the fact that the data collection was retrospective provides some safeguards since the initial recording which triggered the later search was made prior to the formulation of the theoretical bias of this study. For future validation of the stated assumptions, however, multiple observers with prospectively planned and precoded observations will be required.

The observations used here to generate a theoretical base are idiographic records. Therefore, no broad generalizations applicable to other observers or other populations can be made. Yet, according to Bogden (1972, p. 57), the development of theoretical models derived from such simple or field observations is permissible.

> In a sense, then, theoretical models are generated in the field. Similarly, specific hypotheses are generated in the field, and tested and refined or thrown out as the research progresses. A hypothesis can be rather complex and stated in a rather formal way in the field notes, or it may be a relatively simple idea that can be tested immediately.

SUMMARY

This chapter was concerned with theory development through the use of the retroductive method of literature and of field observation. As this study is primarily concerned with the application of the existing literature to a series of single event observations, the critical literature review in the following chapter provides further methodological content. This review of literature in combination with the observational reports in Chapter 4 provide the basis for the formulation of the theoretical assumptions stated in Chapter 5.

CHAPTER 3

LITERATURE REVIEW

INTRODUCTION TO LITERATURE REVIEW

The literature on educational theory, cultural transmission, and basic personality theory provides the basis from which assumptions about the nature of educational therapy can be derived.

William C. Morse (1958) in his paper on educational therapy "How do we teach these children?" defines all education as "a transactional process between the learner and his environment." B. Biber (1958) states the goals of 'regular' as well as 'special' education to be:

1. The development of sensitivity to the world around one,
2. The development of techniques and attitudes for learning by discovery and
3. The development of cognitive and intellectual mastery.

Both Morse and Biber refer to the goal of special education as the development of a 'functioning' human being. Marie Jahoda (1950) defines functioning human beings as persons who actively master their environment, show a certain unity of their personality, and are able to perceive the world and themselves congruently.

Within such a goal frame, William Morse (1958) categorized 'program types' of public school classes for emotionally disturbed children. His categories are psychiatric-dynamic, psycho-educational, psychological-behavioral, educational, naturalistic, primitive, and chaotic. Yet, in spite of his focus on the "transactional" nature of the educational process, even he fails to use interactional parameters in his classification.

Amidon, Hough, and Hunter (1967) whose work with interaction analysis deals with the behavioral aspects of interaction, focus on the

educational intent of the teacher, in other words, on the behavioral aspects of teaching strategies. Issues of identity formation or of consensual validations of percepts and concepts are not investigated in their studies.

Educational therapy, as one special facet of the educational encounter, is concerned with the establishment of the pupil's identity as a functioning human being. Erikson's (1964) developmental system provides the link between identity formation and interactional bonding which he refers to as "love". This role of interactional bonding in the development of identity is described by Erikson:(1964, p. 128)

> It must be an important evolutionary fact that man, over and above sexuality, develops a selectivity of "love": I think it is the mutuality of mates and partners in a shared identity, for the mutual verification through an experience of finding oneself as one loses oneself in another. So let me emphasize here that identity proves itself strongest when it can take chances with itself.

Parson's assumption (1959) that the "relational system around the organism is the system of action" is a useful model since the process of education can be envisioned both as an interactional process and a system of action. The role of communication in such an information gathering system is described by Bateson (1951, p. 5) in these words:

> But communication does not refer to verbal, explicit, and intentional transmission of messages alone;as used in our sense the concept of communication would include all those processes by which people influence one another. The reader will recognize that this definition is based upon the premise that all actions and events have communicative aspects as soon as they are perceived by a human being; it implies, furthermore, that such perception changes the information which an individual possesses and therefore influences him.

Helen Lynd (1965, p. 242) describes the role of language as a major component of interactional communication, in governing perceptual

selection and thereby identity development:

> Each of the manifold uses of language has its special importance for the discovery of identity; the very acquisition of speech is a major factor in helping a child to know who he is and in opening to him a new field of exploration and enjoyment--language itself.
>
> Language also helps to organize for the individual his perceptions of the world. Without going as far as the statement of the Sapir-Whorf hypothesis that what we call the real world is to a large extent the creation of the language habits of the social groups, we must nevertheless recognize that language is, at the very least, a selective factor in helping to determine what we perceive and what we emphasize in that perception--what we experience. Not only is what we can express and communicate inevitably determined by what we experience; but what we perceive from experience is in part determined by the modes of expression available to us.

From the educator's vantage point, John Dewey states in his Pedagogic Creed (1938) that "all education proceeds by the participation of the individual in the social consciousness of the race . . ." and he continues that "the child's own social activities" are the true center of his education. This represents an interactional interpretation of education.

Margaret Mahler in her discussion of individuation (1968) speaks of the "mirroring function" of interactions in the infant's early object relationship and learning about the world.

Jules Henry's anthropological formulation is based on his observations of cultural transmission within the family as well as of other aspects of communication in learning. He couches his assumptions in the language of the mother-infant relationship (1965):

> I have suggested here that in the process of making the baby her own, a mother teaches it certain conceptions of the universe--of time, space, objects, and so on. For such empathic absorption of the universe by the baby it is probably better to use 'imbue' rather than 'teach' for the idea of contact with the universe through another person is not quite cap-

> tured by the terms 'learn' and 'teach'. When one is imbued in this way--as if sun, water and time were filtered to one through the body of another person--it becomes difficult to change one's perceptions, for change would be a kind of death--a detachment from the person through whom the universe was absorbed. Thus consciousness itself is learned in and acquired through another person. From the time we are born we are taught how to be conscious. Consciousness is a socio-cultural phenomenon, and the consciousness of a Pilagá Indian baby is therefore very different from that of an American one [p. 60].

These communication behaviors, may seem as a process of learning, mirroring, or inbueing information. These behaviors are employed in all educational events and are thereby included in the educational therapy, transaction and can be observed and analysed as any other communication events. These events, too, share "command and report aspect" or, in Watzlawick's (1967) language, a component of information and a component of instruction about such information which he terms "pragmatics".

Communication contains both information and information about this information. In developing assumptions about the communications involved in educational therapy transaction, both the information tendered as well as the relationship or pragmatic aspects need to be investigated. The "inbuement" of the pupil can thus be studied in the light of the inter-actional and communication phenomena inherent in the relationship aspects of the interaction.

The following review of literature presents a discussion of those aspects of interaction and role theory that deal with areas directly related to the educational therapy interaction. Following this, aspects of communication and educational therapy are reviewed using analogous constraints.

INTERACTION

Dewey and Bentley (1950) introduced the term 'transaction' into systems theory and defined it as "reciprocal reverberating processes which occur in any system of action of behavior " This definition reflects the dynamic process in any change-producing relationship such as in the teaching act of educational therapy.

Talcott Parson describes such action systems further and emphasizes the need and the rationale for defining organisms in such systems of action:

> But for the theory of action the organism is not a system, but a unit point of reference. The focus of interest for the theory of action is not in the internal equilibrating processes of the organism as a system, but in the equilibrating processes involved in its relations to an environment or situation in which other organisms are of crucial significance. It is this relational system which is the system of action, not the organism as a system. It is particularly important here to avoid an insidious version of the fallacy of misplaced concreteness which has been particularly common among psychologists. This is the conception that "the organism" is a concrete ontologically real entity and that somehow its internal physico-chemical processes, and their interchange with the environment are the "real thing" whereas behavior is a kind of resultant or epiphenomenon. It is increasingly difficult for persons who think in this way to become aware that biological theory is abstract in exactly the same sense as any other scientific theory. Therefore, the organism in this sense is no more an ontological reality than is the famous particle of Newtonian physics. Pari passu the organism, as the boundary-maintaining physical-chemical systems, is in absolutely no sense more or less real than the system of action. Both stem fundamentally from the same footing. Both are systems conceived in terms of a conceptual scheme. Both are subject to empirical verification in the same senses. Underlying much of the psychological bias referred to above within the theory of action has been this biological bias, the tendency to think that only the internal system of the organism is somehow "real" while the rational system is not. [ed. Robert Bierstedt (1959)p.544]

While Parson addresses himself to the existence and dynamics of action systems, Shands (1971) is primarily concerned with the proces-

ses of information exchange as they deal with novelty, adaption, or learning, occurring within this system. He emphasizes the importance of using the images of 'occurence' rather than causation since learning evolves within the interaction in a complex loop and not in any simple "this part teaches - this part learns" fashion. He explains the achievement of "meaning" as a consequent of complex interactional events:

> In modern biology it would be unthinkable to study even the most primitive organism in artificial isolation from its environment. As postulated by General Systems Theory organisms are open systems that maintain their steady state [stability] and even evolve towards states of higher complexity by a means of constant exchange of both energy and information with their environment. If we realize that in order to survive any organism must gain not only the substances necessary for its metabolism but adequate information about the world around it, we see that communication and existence are inseparable concepts. The environment, then, is subjectively experienced as a set of instructions about the organisms' existence, and in this sense the environmental effects are similar to a computer program; Norbert Wiener once said about the world that it "may be viewed as a myriad of To Whom It May Concern messages." There is, however, the important difference that while the computer program is presented in a language that the machine completely "understands" the impact of the environment on an organism comprises a set of instructions whose meaning is by no means self-evident but rather is left up to the organism to decode as best it can. If to this consideration we add the obvious fact that the organism's reactions in turn affect the environment, it becomes apparent that even on the very primitive levels of life, complex and continued interaction take place that are nonrandom and are, therefore, governed by a program or, to use an existentialist term, by <u>meaning</u>. [Watzlawick, 1967, p. 258]

Shand's statement that the organism's external reality is a creature of its own decoding is an important restatement of the often discussed question as to 'what is really learned?'. To Shands and other systems theorists such learning is the product of both the environment and the learner as part of what they see as a reverberating system of interactions.

In interactional and perceptual terms learning is defined by Solley & Murphy (1960) as negative adaptation in which the organism can

be made more or less receptive through its interaction with the environment. Perception and attention will be discussed later. In this context only the fact of environmental impact on the perception of novelty or sameness is important, for as the nature of the data perceived as novel often depends on role ascriptions or instructions in the interactional system.

J. Ruesch (1951) defines this interactional role of perception:

> An interpersonal event is characterized by: a. The presence of expressive acts on the part of one or more persons, b. The conscious or unconscious perception of such expressive actions by other persons. c. The return observation that such expressive actions were perceived by others. The perception of having been perceived is a fact which deeply influences and changes human behavior. (p. 15)

Such influences vary however with the assumed or ascribed roles of the members of the system and with overt or covert instruction so that even the relevance of data will vary with the interpersonal context. Spiegel (1971) defines roles as the 'regulator and stabilizer' of action for they provide a "meshing or gear-like" process within complementary or reciprocal relationships. Yet, as will be shown later, such roles also provide the contextual markers and command messages that give specific "meaning" to interpersonal communication.

All messages which serve to define the transactional system within a dyad, such as the one formed by an educational therapist and pupil, also reduce uncertainty, increase redundancy and thus add information that may lead to change. In the following section aspects of communication directly involved in the educational therapist-pupil interaction are reviewed. The focus of this review is on the "pragmatics" or "behavioral effects" of communication.

COMMUNICATION

The purpose and function of communication is defined by Ruesch (1951) as follows:

> A. To receive and transmit messages and to retain information:
> B. To perform operations with the existing information for the purpose of deriving new conclusions which were not directly perceived and for reconstructing past and anticipating future events;
> C. To initiate and modify physiological processes within his body;
> D. To influence and to direct other people and external events. (p. 17)

Thus, communication is seen as a system of messages flowing both between and within organisms. Bateson (1972) also emphasizes that the efficiency with which each organism will perform his "necessary living tasks" will depend on the clarity of such a communication system. Such clarity of messages, however, must be viewed as the result of the composite of the original message unit, its feedback and any subsequently added messages. In such a system both sender and receiver must then be considered to be 'responsible' for clarity.

Communication is continually occurring because it is impossible <u>not</u> to communicate and because the participating organisms develop their informational fates, which one might also term informational 'selves' within this constant interchange of communication.

> We can never abstain from communicating, and as human beings and members of a society, we are biologically compelled to communicate. Our sense organs are constantly on the alert and are registering the signals received, and inasmuch as our effector organs are never at rest, we are, at the same time, continually transmitting messages to the outside world. Therefore, our biological need to receive and transmit messages is in some ways a handicap to the investigation of the scientific processes of communication.

> In order to overcome this difficulty, it is necessary for us to make a structural assumption regarding the state of signs and signals within our own organism. This end result of perception and transmission we refer to as information [Ruesch (1951), p. 7].

Communication Functions

Signal Functions

K. Bühler (1928) and E.C. Tolman (1951) referring to Bühler's work describe the signal value of all percepts. Such signals may be received from inanimate sources, such as from the spatial cues of the natural or artificial environment, or from animate members of the environment. Signals are in the nature of orienting cues, they are maps but not the environment itself. The signals, animate or inanimate, are territorial or behavioral abstractions but are neither territorial nor behavioral imperatives in themselves. Ogden and Richards (1923) state that signals "organize, record, and communicate." Tolman (1951) perceives the organism as orienting within such a system of signals, and as becoming increasingly more efficient through an internalization or condensation of such signals.

Attention and the preceding orienting reflex prepare the organism to receive such signal messages. From the vernacular where the 'teacher' "hits the mule to gain his attention" to the sophisticated method of F. Hewett (1968) the gaining of attention must precede data presentation to result in information processing.

Perceptual factors ranging from stimulus strength to motivational valence factors, or 'organismic relevance' (Werner, 1957) affect such signal-induced behavior. Both receiver and sender factors will determine the fate of the signal, for signals themselves are only modifiable by an increase or decrease of their strength, within bounds of the sensory equipment of the receiver.

Shands (1971) terms the shift from attention to signal to receptive action, a shift from "anticipatory" to "consummatory" behavior. This

distinction appears most important when one considers the initiation as well as the performance proper of the teaching and learning act: first comes the necessary 'stance' -- the being prepared to learn, or to 'take-in', followed by the necessary rehearsals and the actual 'performance'. Ruesch adds the importance of acknowledgment of non-acknowledgment as response-signals which are of major importance. Therefore, the mode of signal delivery, feedback, and context need be considered when assessing either effect or effectiveness of the signals involved.

Symbolic Function

The transmission of information is probably the best known aspect of communication theory; yet the mechanism by which information is conveyed, received, stored, or retrieved is only incompletely understood. The interpersonal information model assumes that information is encoded in the recipient, by means of representation or a replication model of the information. Unless some such representation exists, and exists in a manner that is stable over time, ongoing communication would remain non-synaptic.

Information delivery is certainly a major function of communication. Wiener (1958, p. 5) states:

> To live effectively is to live with adequate information. Thus, communication and control belong to the essence of man's inner life, even as they belong to his life in society.

According to Watzlawick (1967) and Ruesch (1951) the passage of information must be seen as an interactional feedback loop rather than as a linear cause and effect relationship. Memory is consequently viewed as some type of storage system where retrieval and transmission constitute resources to reduce entropy and thus increase organization. Presumably it is this capability, namely the reduction of randomness and disorganization, that makes communication important in the organizational scheme of psycho-educational interventions. This ordering of inter- and intra-personal processes will be further discussed in the section dealing with therapeutic communication.

H. Shands (1971) defines information as "anything that makes a difference", a statement which he derives from the digital aspects of the

function of the vertebrate nervous system. The basis for such an assumption is the ability of nerve cells to be stimulated or not-to-be stimulated, thus to be either different or not-to-be-different.

Ruesch (1951) considers the social situation as the primary unit under consideration. In order to permit interactional relation, exchange cues must permit "mutual awareness of perception". The members of each interaction must possess or create a system of notation open to a mutual decoding of their messages. Additonal system properties affecting information transmission are further discussed in the discussion of rule generation and contexts. However, it must be stated here that unless a rule system exists which allows for such "mutual awareness of perception", information cannot be exchanged because the role of the information giver affects the fate of the information. Relevance, credibility, and human confirmation or dysconfirmation are all aspects of this phenomenon. The relationship aspects of communication provide the definition of roles and thereby the fate of the message.

Relationship Function

In addition to its report function all human communication also carries a relationship message. Such a message is called "meta-communication" by Bateson (1956) and comprises "all exchanged cues and propositions about codification and relationship between the communicators."

In the case of signals, according to Bateson (1972) this meta-message may concern an acknowledgment of the signal, asking for a repetition, denoting a failure of having received it clearly, or possibly a respondent action or message. In the case of informational messages the meta-message conveys the instructional matrix as well as information about

the relationship. Such a meta-message can be either implicit or explicit. An implicit message might concern role ascription, e.g. a message from master to servant, pupil to teacher, customer to clerk, so that the role assignment implies the what-to-do code or instruction. In other instances such instruction may be an explicit segment of the message-- such as the language inflection of command or question.

Watzlawick (1967) cautions that the outcomes of such codification are not 'causally' but only 'effectually' related, because of the complex nature of the communicative relationship and because the communication chain is constituted of feed-back loops so that no true beginning or ending is ascertainable. According to this, communication research must pick up arbitrary sectors in time to study arbitrary segments of a continuity. In this study, for instance, we look at the teacher control aspects of the relationship function and begin our observation with teacher originated acts.

Haley (1963) deals extensively with the definition of relationships and the resultant control aspects. The initial definition of a relationship is seen as one where an unlimited range of possible behaviors is available; as roles are defined, this range is narrowed with each further definition and with each subsequent encounter. Relationship messages are defined in three major ways: by context, and through verbal and kinesic means. Goffman (1959)and Schefflen (1972) deal extensively with the contextual aspects of relationships. Deference, placating, control submission and control exertion are some of the plots of their observations; body language and verbal 'commands' also carry such control messages.

At the outset relationships become defined as either symmetrical or complementary; these relationships are marked off in gestural patterns of reciprocal and non-reciprocal gestures. Kinesics are that aspect of communication study concerned with the non-verbal parameters of communication. Scheflen (1972) describes the careful bracketing of encounters which he and his group call "frames", as their territorial parameters and as kinesic markers of speech and discourse; these are further discussed under communication processes.

Communication Processes

Communication may be verbal or non-verbal. Such communication may concern the here-and-now and thus be of signal nature, or be 'about' events and be couched in symbols; both will also concurrently carry relationship messages. The enormous intricacy of the communication process resides in this multi-channel and multi-purpose aspect of communication. Therefore, in practice a complete parcelling out of each component is impossible.

Messages may be carried simultaneously on verbal and non-verbal channels. Either one or both may carry the referent and relationship component. They may be congruent or incongruent. Indeed, the very fact of utterance may be a comment upon the relationship; at the same time each selection of a specific utterance further defines the relationship. This duality is often most clearly apparent when dealing with pathological communications (Hayley, Beals, 1963), yet it may occur at all times.

The clarity and congruence of the verbal or the verbal-non-verbal discourse, the use of markers, and the statement of logical steps, all effect the nature of the transmitted information. Watzlawick (1964) in his audio-taped communication samples demonstrates these characteristics

of verbal discourse, as the process of communication becomes a part of the information conveyed.

Non-Verbal Communication

The non-verbal aspects of the communication process concern both the non-verbal markers of the verbal discourse as well as an entire non-verbal message system of kinesics and the system of roles as they affect communication behaviors. The language markers deal with characteristics such as pitch, pauses, or speed of speech. Goffman (1971) in his concern with the outward "display" of communication describes this parameter of gloss as follows:

> The terms 'externalization' or 'body gloss', refer to the process whereby an individual pointedly uses over-all body gesture to make otherwise unavailable facts about his situation gleanable. Thus, in driving and walking the individual conducts himself or rather his vehicular shell--so that the direction, rate and resoluteness of his proposed course will be readable. In ethological terms, he provides an "intention display". By providing this gestural prefigurement and committing himself to what it foretells, the individual makes himself into something that others can read and predict from; by employing this device at proper strategic junctures--ones where an indicated course will be perceived as a promise or warning or threat but not as a challenge--he becomes something to which they can adapt without loss of self-respect. (p. 11)

All expression of non-verbal behavior has communicative valence, or, in other words, contributes to a definition of the context at hand. The paradigm of not being able not to communicate holds for all behaviors. However, in a concern with the educational dyad, special emphasis must be put on roles and reciprocals (Scheflen, 1972). Thus, gesture for instance may "frame or punctuate" relationship as certain behavioral markers elicit specific behavioral sequences in humans. Such behavioral sequences are called "reciprocals" by Scheflen and Birdwhistell

(1972, 1970). At the same time encounters are punctuated by contextual markers which are culturally defined. The word culture here denotes both the wider culture of the distant environment, but also the increasingly narrower "culture" of the transaction at hand, for instance from the cultural givens of the provision of education to the specific "contract" of a given educational therapist-pupil encounter. The nature of the definition or role assignment and role ascription is communicated to a significant extent by the kinesic behaviors of the protagonists.

Spiegel's definition of social role is useful in the context of this study.

> Although the words "social role" seem almost self-explanatory, they have actually been used in many different ways in social science. I have found the following definition useful: A social role is a goal directed configuration of transactions patterned within a culture or subculture for the functions people carry out with respect to each other in a social group or situation. [Spiegel, 1971, p. 95]

Mediate Communication

Mediate processes, a special variant of non-verbal communication are like props in a play serving to define the context further. Such mediate cues can be territorial, sartorial, temporal, or spatial, decreeing where an encounter is to be held, the distance between partners, and the use of time to bind or separate. When Hall (1959) refers to the "proxemics of microcultures" or the messages carried by spatial configurations, he speaks of such issues as personal, social, intimate and flight distances. Mediate processes also concern the territorial aspects of discourse. Goffman (1971) cites the following examples:

> If territory-like preserves are the central claim in the study of co-mingling, then the central offense is an incursion, instrusion, encroachment, presumption, defilement, besmearing,

contamination-in short a violation.

> There is ecological placement of the body relative to a claimed territory. (p. 44)

The stage director, of course, must be the master of such context building, so much so that teachers and educational therapists might wish to learn from his techniques.

Thus a myriad of data make up the totality of the communication process. Birdwhistell (1970) addresses himself to the seemingly impossible task of not only registering such a multitude of data but also of deriving meaningful behavior-steering information. He states that man uses "all channels of all the sensory modalities"(p.111)to convey and receive this information and that human culture provides ways of encoding these data into "chunks of meaning" such as words and gestures or sentences and happenings into 'contexts'.

Communication Effects

Information transfer or the processing of messages appears to be a characteristic of matter. From the instructions of crystals to the constitution of nation states, information provides order, direction and structure to action and experience. The matrix of change is the receiving and responding to information or, in other words, the fate of an organizational plan on the basis of new information.

Self-Awareness and Self-Definition

The development of a self can be seen as the result of such information processing in an interactional system. Shands (1972) even goes so far as to define consciousness as a "knowing together" where two respondents come to know each other in discourse.

Bettelheim (1967) describes the self as "what one knows and can do" or, stated differently, as the sum of one's information and the range of action one can originate. Herta Riese (1962) refers to the informational aspects of the self in a different although equally appropriate manner when she says that:

> The desire to know is an attempt to assume rightful intellectual ownership of an ever widening world. Such an attitude implies acceptability of the world as a potential possession. To the extent that we achieve ownership of the world by knowledge, we become the caretakers and managers of our territory. (p. 30)

This statement not only clarifies the issue of self-definition but also concerns the therapeutic aspects of educational therapy with the aim of coping through knowledge.

Role and Context Definition

As informational competence becomes coping, the third major aspect of the effect of communication is that of context change and clearer role definition. According to Ruesch (1954) context is defined through communication, as communication also defines context. Both direct and mediate cues refine the context of each encounter, the circumstances of time and place, the covert contract of the transaction, and the immediate postural markers:

> This context is summarized by the label which people give to specific social situations. Identification of a social situation is important both for the participant who wishes to communicate, and for the scientist who aims at conceptualizing the processes of communication [Ruesch, 1951, p. 23].

The specificity of the context is further defined by the roles assumed by the participants in the discourse. Ruesch refers to the social context as role and rule proscribing:

"at the wrong time or at the wrong place" so that the receiver "cannot understand the message at all or misunderstands it." He continues by emphasizing that no verbal or gestural expression can be called disturbed per se, before it is considered in a social context and followed by other people's reaction.

"Dysfunctional communication may therefore be defined from the effect gained" so that, according to Ruesch (1972) dysfunctional communication can be described as follows:

> (a) on a technical level, statements about the communication apparatus, the dimension of the network, and the functional implication as well as the physical aspects of transmission and reception.
> (b) on a semantic level statements about the accuracy with which a series of symbols transmit the desired meaning of a message including semantic distortions.
> (c) on an interaction level, statements about the effectiveness of the transmission of information upon the behavior of people in an attempt to achieve a desired effect. (p. 19).

Dysfunctional patterns may involve questions of mechanical or content clarity, semantic appropriateness, interactional effectiveness or role congruence. A special although not unusual instance of the interactional dysfunctional event is the paradoxical injunction or "bind".

Watzlawick (1967) states:

> Paradoxical injunction or binding is that in the face of contradictory injunctions one chooses one and loses, or suffers, the other alternatives. The result is not a happy one-as already mentioned, one cannot eat one's cake and have it too, and the lesser evil is still an evil. But in the face of contradictory injunction, choice is logically possible. The paradoxical injunction, on the other hand, bankrupts choice itself, nothing is possible and the self-perpetuating oscillating series is set in motion. (p. 217)

As the dysfunctional person appears to be more tenuous in his information processing ability, binding, paradoxical injunction and

> Once the position of the observing reporter is clearly defined and the social situation has been established because people have entered into communication, it is left to the participants to identify the social situation. The label which a person is going to give to a social situation is intimately connected with the rules which govern this situation as well as the roles which the various participants are to assume [Ruesch, 1951, p. 27)

Ruesch also elaborates on the significance of the role aspects in developing information exchange as he comments on conditions within a symmetrical or coequal system where immediate feed-back is available. Scheflen (1972) assumes that in such a relationship the reciprocals are non-coercive, and clearly defined. Ruesch suggests that such information usually is not conveyed deliberately or even with full awareness.

> Relationships are only rarely defined deliberately or with full awareness. In fact, it seems that the more spontaneous and "healthy" a relationship, the more the relationship aspect of communication recedes into the background. Coversely "sick" relationships are characterized by constant struggle about the nature of the relationship, with the content aspects of communication becoming less and less important. Instead, it is assumed that all parts of the communication act are equal in their significance in terms of the total context of communication. In this sense, communication in all its parts has an integrational "aspect" to 1. Keep the system in operation: 2. Regulate the directional process: 3. Cross reference particular messages as to comprehensibility in a particular context and to relate the particular context to the larger context in which the direction is but one special situation(Ruesch, 1959, p.32).

In this social matrix communication may be enhancing or destructive, pathological or therapeutic.

Pathological or Therapeutic Effects of Communication

In a recent re-issue of the classic Disturbed Communication Ruesch (1972) adds a new preface to clarify some points that have caused confusion. He clarifies the connotation of 'disturbed' as not being concerned with an 'accepted norm' but rather as communications that occur

ambiguity appear to affect his coping equilibrium more seriously. It may be for this reason that the literature of both psycho-educational and psycho-therapeutic strategies emphasizes clarity and congruence in communication with the dysfunctional. Such clarity involves the discourse about events as well as the discourse about relationships.

Watzlawick (1967) suggests that information about relatedness to people occurs through continuity and consistency of exposure to similar social events beginning with the child's experiences with his mother, then with members of his family, later with contemporaries at school and on the playground. These aspects of this relatedness are also a prime concern of educational therapy.

There is one other type of interactional communication which appears to be of paramount importance though it is rarely classed with the issue of communication: this is the issue of availability. This condition is communicated through kinesics, proxemics, and verbal markers. Some of the importance of availability in structuring the child's life space is conveyed by Henry (1965).

> Some people are available spontaneously, others have to be made available, and some can never be made available at all; but between availability and inaccessibility there always has to be someone willing and able to exert the necessary force in the direction of the former. ...
>
> People are made available to others through the love and determination of those who make themselves available--and the process of bringing to life has to be repeated every day because all the fundamental tasks of existence are repetitious (p. 287).

Thus the degree and nature of availability communicated in action by the therapist, too, conveys something about the benignity or malevolence of the milieu provided. But regardless of the label given, the criterion of whether an exchange becomes therapeutic or not is tied to

the perception that "the other person has a certain readiness to understand, to acknowledge and to reply." This has been aptly referred as the therapeutic milieu. (Ruesch, 1961,p. 31)

The nature of this milieu or the quality of this relatedness is a proper concern of educational therapy.

Educational Therapy

There is no single all-inclusive definition of educational therapy. Some authors use method as basis for their model-making, some etiology, some theoretical orientations and yet others a combination of these.

The method oriented model is exemplified by Cruikshank (1961), the language-oriented approach by Myklebust (1966), the etiology-oriented approaches by Fenichel,(1965) Bettelheim, (1967) and Riese (1962), and the mixed models by Hewett (1968) and Frostig (1972).

The term educational therapy is used in varying connotations Callagher (1964) and Carriker (1966) use the term educational therapy primarily in the sense of academic rehabilitation, Redl (1971)to denote a psycho-social approach to the rehabilitation of children and Hewett (1968) to describe a developmental strategy. An interactional formulation concerning educational therapy is suggested by Shand's (1972) discussion of the role of novelty in human dyads. Shands, however, is an epistemologist and not an educator.

> To understand most broadly, we understand in terms of the threat of novelty to any system. Too much novelty disturbs the internal relatedness and leads to adaptive effort. But, at the same time the system must have negentropy or continue its existence, which is to say that it must incorporate novelty. The simplest way of reducing novelty is that of replication or reflection, and the possibility for the same form to occur in two different systems allows those two systems to communicate with each other [Shands, 1971, p. 123].

A similar model of the teaching-learning interaction is also described in anthropological literature on cultural transmission, for instance by Kluckhohn (1962) and by Erikson (1951) in the developemental-genetic model. These models are not only compatible with each of the models of educational therapy but also appear to integrate them as they include an awareness of the role of sensori-motor learning, as well as a developmental approach to socio-emotional growth. Adding a focus on interactional communication provides a model for both event and process. In such a system the educational therapist is seen as one who assists the pupil in gaining cognitive control over his environment, so that coping may be enhancing through enhanced data processing.

This event represents the classic example of interactional aspects of educational therapy. Shands (1972) deals with this assimilation of information as transformation. Such transformation moves data in a transmodal manner from one sensory channel to another, e.g. auditory to visual, or contextually from one generic type to another, e.g. from relationship statements to informational content. Shands illustrates this process by citing the experience of Helen Keller as the classical example of successful educational therapy presented by an interactional communication model.

> Transmodal Metamorphosis: the process of transmodal metamorphosis is featured in the human technique of naming. To the child Helen Keller, a new world of meaning opened immediately when she was able to grasp (through the hand shapes conveyed to her by her teacher) that "things have names" which means that a manipulatively known shape can be referred to be a verbal shape, no matter how that verbal shape is momentarily embodied.(1971, p. 48)

Attention, Perception, and Cognition

Only the interactional aspects of attention, perception and cognition are quoted in this review. The generic developmental components, and the issues of individual differences and pathologies of attention, perception, and cognition are not detailed here. Instead only those facets involved in a socialized or interactional context are cited.

Recent psychophysiological research has been concerned with the mediation of attention and set. The neuromechanisms as well as environmental events that permit such "pre-adaption" are discussed by Bruner (1973) and Pribram (1969). The concept of intentionality or feed-forward is concerned with the readiness and availability of an organism to receive stimuli. This capacity to achieve and maintain arousal states must precede each information-gathering transaction.

Bruner, et. al. (1969) suggest that repeated experience or practice increase the efficiency of the orienting behavior sequence by "allowing the development of appropriate synchrony between feed-forward, corollary discharges, and feed-back from effectors " (p. 115).

Such behavior sequences, including orienting toward a stimulus become "modularized" which means that the constituent behaviors are compressed into subsidiary patterns; thus,with a smaller number of behavior units necessary,fewer component behaviors are needed. However, the earlier behavior programs do not disappear and re-emerge with stress, overload or unfamiliar surroundings, or if the more recently acquired complex behavior proves to be unsuccessful.

Attention is the gatekeeper for the organism. Information or meaning is allowed to enter the information processing apparatus while

"irrelevant", excessively redundant or habitual information will not create sufficient arousal to gain entry. Pribram (1969) presents a model of attentional function that satisfies current experimental findings in the field of stimulus reception. This model assigns priority or importance rankings and suggests that the organism eventually develops strategies for entire groups of stimuli so that decisions about single data need no longer be made. Such classes are then built up through generalization from single experiences. In practical language this could be described as a learning what to attend to or what to look for. Priorities and urgencies change according to a "fluctuating standard of relevance". Relevance also depends on context or the conditions within a given relationship such as roles and expectations.

For instance, Solley and Murphy (1960) in discussing the "search-set" phase of stimulus seeking or stimulus reception, suggest that the nature of the moment before stimulation may be important since a threatening or an encouraging social context "may affect the fate of the information" subsequently received.

The role of perception in the educational context is poignantly stated by Bruner (1962, p. 120]:

> Indeed, we know now, after a quarter of a century of research on perception, that experience is not to be had directly and neatly, but filtered through the programmed readiness of our senses. The program is constructed with our expectations and these are derived from our models or ideas about what exists and what follows what.

One might add that such models derive from human intervention.

The motivational and social components of perception provide ample evidence that the interactional context modifies perceptual input.

Not only do need states in the beholder structure percepts, but concurrent social inputs also modify percepts. In this sense perception is a shared social experience, and is bound into the fabric of interpersonal communication.

Studies of the perception of incomplete auditory and visual material suggest that a "preknowledge", readiness or orientation facilitate perception. High sequential probability increases attention and perceptual speed. Corah (1964) suggest that adults in the environment may act as facilitators or inhibitors of such differentiation.

The contextual and motivational influences on perception are documented in summary by Bruner (1973) and Solley and Murphy (1960) who highlight the importance of set and motivation as well as of need states such as hunger, for all these affect perceptual efficiency. Lastly, the studies concerned with enrichment and deprivation suggest that the provision of perceptual data by the environment affects the overall perceptual performance of the child: not only is more perceived as more is offered but also the motivation to perceive can be increased.

The child's developmental stage determines effective methods to enhance the cognitive performance in children. According to Bruner (1969) direct demonstration is needed for the young, early operational, and verbal instruction for the school-age child who is able to perform formal operations. Maintenance of responses-appropriate contexts is a prerequisite for adequate cognitive performance. Bruner's definition of such an enhancing context is that of an interactional system where motives for pleasant sensation and pain reduction are available and where positive

evaluation and identification are present. These properties are also characteristic of communicational contexts. Bruner (1971) also offers good evidence that expectancy levels and role assignment affect cognitive potential; such role expectations include sex-role typing social roles and ascribed ability levels.

Context in attention, perception, and cognition is affected by idiosyncratic experiences such as role expectation and role assumption, and the nature and quality of the relationship. Teacher-pupil interaction can modify attention, perception and cognition by changing these variables. Cognitive strategies, or the programs of concept management are also affected by the wider social context.

Cognitive strategies develop in accord with certain role demands and role expectations. Cognition can be enhanced and diminshed on the basis of expectations, for the goals and expectations of the significant others in a child's environment will significantly affect the direction and range of his cognitive efforts (Bruner, 1972). The language of cognition or, in other words, the levels of abstraction as modelled, affects the cognitive style of the child. Cultural givens and cultural needs also change the cognitive output. In this same vein, the cognitive style presented by the educational therapist to the pupil provides the cognitive models or cognitive culture.

Ego Function

For effective survival a cognitive map is needed to deal with an environment of great complexity. Lois Murphy (1962) says that "actively dealing with inner and outer stimuli toward cognitive organization is contingent on interactional processes ".

The part of the person dealing with such stimuli, through sorting and reacting is commonly labelled the ego or that part which deals with reality (Hartman, 1964). Dealing with the development of the ego is the final step of first order learning (p. 28).

These ego functions, first an awareness of the physical self, then of the iconic self, and ultimely of an autonomous activating self (Bauer, 1973), must be established before second order learnings can be accomplished in a smooth and socialized manner. Strategies developing these functions have been referred to as "ego-synthesis".

As a shorthand description of selfhood, Bruno Bettelheim (1967, p. 34) states that "the self consists of what one knows and can do ", and adds that "the more we act and interact, the more self we have." This statement serves as a premise for an interactional model of the self as this self changes through interaction.

Bowlby (1969) shows the unique importance of the mother-infant relationship of both the affiliation and separation experience on the course of both primate and human development. This developmental course is determined by the nature of the consistent signals sent to and received by the offspring. In this sense, the quality of mothering serves as the prototype for all primary person-to-person interactions, and therefore, in this sense, too, can the teacher-learner dyad use the primary

mother-infant dyad for genetic descriptive clues. This does not suggest that teaching is mothering, but it does suggest that the teacher-learner interaction parallels the prototypical mother-child interaction.

The important qualities of this dyadic interaction are sensitivity and alertness to needs, timing, listening and responding to feed-back, and most of all a reciprocity of intitiation; this interaction is based on availability and timing as previously discussed by Henry (1965). Also a predictability of reaction patterns appears to increase effectiveness of intervention.

Bowlby (1969) describes the basic attachment components of the developmental sequence leading to successful teaching learning interaction in the following manner:

> To frame a plan the set-goal of which is to change the set-goal of another's behavior requires a good deal of cognitive and model building competence. It requires, first, a capacity to attribute to another a capacity to have goals, and plans, secondly, an ability to infer from such clues as are given what the other's goals may be; and, thirdly, skill in framing a plan that is likely to effect the desired change in the other's set-goal. [p. 352]

Therefore, the development of an interactional theory of educational therapy focussed on the teacher behavior aspects, involves a description of such "set-goals" and of the models or programs of interventions used by teachers to achieve such'set-goals'. The assumptions which follow deal with such apparent plans for change, or teaching products, and the skills, or processes, used to achieve such plans.

From the foregoing literature the following assumptions about the interactional events of educational therapy may be deduced:

1. Educational therapy may be viewed as a dyadic communication system with complementary roles.

2. Role definition through direct verbal and non-verbal and mediate informational cues appears to clarify communication and provide orienting set and attention. Both perception and cognition are affected by context role status.

3. The process of communication affects all individuals as they derive their information both about their environment and their own selves from the communications received.

4. These selves change through the processes of feed-back, clarification and self-confirmation.

SUMMARY

Observation of educational therapist behaviors during the teaching interaction will be reported and will serve as a clinical observational base for the development of some theoretical formulations. The encoding of these observations is based on concepts derived from the literature search reported in this chapter.

CHAPTER 4

OBSERVATIONS

INTRODUCTION

Field observations over a twelve year period (since 1960) were used to obtain the baseline data from which assumptions about some of the characteristics of educational therapy teaching events were made. A description of the setting and sample involved is followed by a discussion of these observations and their recording. The observations themselves are presented in three discrete contexts: first, in terms of salient therapist behaviors; secondly, by quoting behavioral descriptions followed by explicatory comments; and lastly,as behaviors categorized by their apparent goal function or inferred intent; comments on some characteristics of the communication processes as observed in educational therapist complete this section.

DESCRIPTION OF SETTING AND SAMPLE

The observations used to generate the theoretical assumptions in Chapter 5 of this study cover a twelve year period and were made during supervisory visits with four educational therapists. These therapists worked, among others, with eight profoundly dysfunctional young children. Four of these children were entirely mute at the outset of educational management, the others without sequentially meaningful speech. All of them had minimal capacities to relate to others; the children's ages ranged from an entry age of three to an exit age of eighteen.

These educational therapists whose behaviors are recorded here had varied backgrounds: one had an M.A. in Special Education, one was an elementary teacher with a basic teaching preparation one a former pediatric psychiatric nursing instructor with a temporary primary teaching credential, and one an experienced elementary school teacher. All of these teachers exhibited what appeared to be superior 'talent' or a high success rate, both in gaining rapport with these dysfunctional pupils and in developing their language and basic learning skills. None of the teachers had prior experience or training in working with such severely dysfunctional pupils. Initially, their way of relating was based on their own perception of their pupils' needs and was probably reinforced by their pupils' responsiveness. Six of these students had previously encountered other teachers to whom they had not related as well as they did to the educational therapists mentioned here. Further observations of their special ways of behaving in their interaction with these students were triggered by the favorable outcomes of these initial encounters which constituted the "surprising phenomena" previously referred to.

METHOD OF OBSERVATION AND RECORDING

Observations during the earlier stages were recorded as part of ongoing progress notes in the case files of pupils as part of narrative recordings. Later, for purposes of supervision and training of additional personnel, some observations of specific teaching events were recorded so that each observation would last for the duration of this event. Some examples are "greeting a child in the morning" "making a life-size whole body picture" or "gaining initial attention." More recently, some generic distinctions surfaced showing differences between the communication characteristics of educational therapists and teachers of 'normal' pupils. While the initial recordings were unselected, later ones were selected observations, focussed on specific context and referred to as observations "categorized by intent."

Each observation lasted at least ten minutes, often longer where certain teaching activities took more time. During the same period of time school observations on the teaching of 'normal' students were regularly made as part of the investigator's supervisory and mental health consultation functions. Thus, the behaviors of early childhood teachers of 'normal' children and the behaviors of teachers of dysfunctional children were experienced at the same time by the observer and some differences in the communication behaviors between these two groups of professionals surfaced. While the pupils involved often would represent similar 'mental ages', skills, and interests, the behaviors of regular teachers and educational therapists would often appear quite different from each other.

Video tape observations of inexperienced educational therapists in training also served to highlight the unique features of experienced educational therapists' behavioral repertoire. This subtle though definite difference became the starting point for further observations of behaviors of educational therapists; these differing behaviors then became the baseline observations for the theoretical assumptions which are offered later.

CHARACTERISTICS OF EDUCATIONAL THERAPIST BEHAVIORS

Some Salient Aspects

In general, the educational therapists would speak more slowly and use slower gestures than teachers' of 'normals', they would turn directly to the child to whom they were speaking, maintaining postures of involved concern during their discourse. Invariably they would lean toward the pupil expressing what Scheflen (1973) calls "withness". Their discourse would tend to be addressed to an identified recipient while more discourse directed "to whom it may concern" occurred in "regular" childhood education situations.

Educational therapists tended to "punctuate" their statements not only for cadence but also for referents, using sound and gestural stresses. For instance, one therapist when teaching a child to draw a square, would audibly tap her foot on the floor each time an angle was to be drawn. Explanations of space and direction tended to be accompanied by many expansive and explicatory gestures. Such gestures appeared both as markers as well as cross-modal cues. Some of these gestures carried what could be called a 'motor encoding' message as for instance a circular head and hand movement by the teacher when giving instruction to draw a circle. A sharpening and sorting of the perceptual world seemed to be intended by a separation of stimuli with the educational therapist pointing to "this but not this", so that focal attention would be focussed and isolated.

Throughout, the educational therapist's kinesics carried a clearer "withness" (Scheflen, 1973), both in total body posture and head and neck

position. There appears a great deal of careful positioning of body vis á vis the pupil. The educational therapist also seemed to use many gestural markers, pointing to the self and the other to accompany statements, demands, or questions and emphasized the actor and audience roles.

As an overall impression, educational therapist behavior appeared 'crisp', almost disjunctive, as if trying to emphasize and punctuate events.

Sample Observations With Comments

The following are excerpts of observations of teaching interactions:

> Teacher 1 calls J to table by catching his gaze, touching his shoulder. Turns towards table, sweeps gaze towards table, tells J it is time for work now, recess is over. J walks over, stays in body contact with Teacher. They sit down, Teacher's hand is still on J's shoulder. The lesson is laid out. Teacher takes it slowly, moving her gaze from J's front to the paper. J's eyes follow and he picks up the crayon without hesitation - seems to know this sequence now. Before he can start response Teacher 1 stops him to check out instructions - (she seems to zero in on sequence and cueing in on verbal instruction) - 'I want you to trace the green sqare first - think which is the green square.' 'Good, you waited for instructions!'

Comment: This sample shows alerting and attending behavior.

> Teacher 2 works with B. A life-size self-portrait is being produced. For the entire observation time the body image properties of head and neck are explored. Teacher 2 uses touch and sight both from mirror and polaroid camera to fix on the head-neck-relationship as well as the identity of B's neck and Teacher 2's neck and B's head and Teacher 2's head.

Comment: Both sensori-motor data and identity relations are repeatedly brought in, checked out and responded to. Throughout this interchange Teacher 2 monitors the state of attention, keeping a state of receptive arousal going through voice and body modulation. Relational

statements and functional description represent a transition from purely descriptive to cognitive areas.

> Video tapes of B and V show a beginning of autonomous self differentiation. B and V are engaged in a screaming duel. Teacher 2 calms them enough so that the three of them can hear each other. Teacher 2 begins by sorting out their feelings, B are you mad at V? V are you mad at B? What happened, did B hit you? V says that he got mad at B. Teacher 2 asks V do you like this? V says, no. Teacher 2 tells V to tell B, I don't like this. V shouts this at B, B turns to go out to the yard, V follows him and they both go to the swing to play.

Comment: Self differentiation and reality testing seems to be the focus.

> P is afraid of the weather. All his fears are bound up in his fearful, "will it rain today?" Teacher 2 knows that this appears to be the sum of all his dreads and they start to "study the weather". P finds his one-to-one tutor, and they begin what they call their "rain-making" experiment as they investigate steam condensation. Then P dictates the steps of rainmaking for his chart. Each step is accounted for and a chart showing sequence and causes and effects taken from their kitchen experiment appears in the room. P reads the chart to the observer and smiles and says, "it won't rain today!"

Comment: Use of cognitive skills are harnessed to foster reality testing and aid coping.

Teacher 1 found that at one time R could only attend to her voice if she held his hand. During the first year of their encounter, in order to obtain a set for listening, Teacher 1 had to touch his hand and let it rest inside her palm; only then could he steady his gaze, look at her face and process her voice. It was thought, then, that this child might be lipreading; however, he could subsequently gain focal attention to outside voices without such contact and even later on, from a distance. After graduation from a regular high school he was accepted by the Army in an electronic training program.

Until the hand touch and postural attention-gaining method was found, R was considered unschoolable, probably profoundly retarded and a candidate for permanent institutionalization. Not only was his language echolalic, but he also seemed confused about his body boundaries. Teacher 1 used her free hand to point to the person about whom she would speak - touching R when her statements referred to him, herself when she spoke about herself. When the consultant commented on this to her, she seemed surprised having been unaware of this action. R developed referent speech and the correct use of the pronoun 'you' and 'I' during the first year of this psycho-educational therapy, responsive speech at age 8, the second year of his psycho-educational management.

Teacher 3 would demand that T, a mute hand-flapping toe-walking five year old, sit down and look at the book he wanted to have read to him. Teacher 3 would comment on T's attending and would allow a second choice story as T settled in. At that time T also became more directly responsive and involved with Teacher 3. This change developed in a five week time period. After that T would focus on Teacher 3's postural cues, watching his stopping or sitting down to develop a receptively attentive posture.

Teacher 3 for a period of four months would use time referents with D in every transaction. He would mention what time it was, how long the present activity would take and what would follow. In taking leave at the end of the day, Teacher 3 would always state when he expected D back and what the first activity would be. Until this time D would glide through the school day appearing to be without much memory for what happened before and what happened after; yet she could perform

skillful motor acts. Her rate of retention in many areas of her learning increased so that at the end of the 'time-training' period her academic skills had improved more than one academic year. The repetition of what was finished or done before, what time it was now, what would be done later, yesterday or tomorrow, appeared to change D's perception of herself in a time context and to make other 'before and after'relationships accessible.

The use of life-size self-figure tracing, coloring and cutting out, is described as a basic first order curriculum unit elsewhere in detail (Bauer, 1973). Analysis of video tapes shows that this procedure as handled by Teacher 3 and Teacher 4 involves the preparatory phase of gaining and holding attention, followed by offering informational data in a multimodal presentation, and finally by cognitive and self-representational activities. Throughout this 'unit' the educational therapist appears to mediate the data by communicating almost simultaneously about the information and about the relationship.

The educational therapist constantly uses "I" statements and time and place statements so that each communication segment tends to carry both a personal and a time-and-space reference. Duration and time parameters, both in terms of length or temporal relation, are frequently and explicitly stated.

The same exercise observed in a "normal" kindergarten and in a class for educable retarded children shows the kindergarten and the EMR teacher primarily focussing on the product, making 'we' statements as in "we are making this self portrait" and with a lesser emphasis on the attributes of the child and greater emphasis on the attributes of the portrait. While the

educational therapist frequently brought the pupil to the mirror or had him touch or look at himself, making the pupil the object of study, the teacher of 'normal' pupils referred to the image as the object of study.

Behavioral Characteristics Unique to Educational Therapists:

In summary, the following behavioral events appeared uniquely in the educational therapists' repertoire:

Clear kinesic markers for endings and beginnings of discourse.

Gestural or motoric encoding of instructions.

Clear 'I' statements and 'you' statements.

Emphasis on the pupil rather than on the pupil's product.

Involvement in the pupil's special affective pre-occupations in a cognitive manner.

Repetitive and frequent verbal communications concerning time and space parameters of the transaction.

OBSERVATIONS CATEGORIZED BY INTENT

The observed educational therapist behaviors may also be categorized according to their special 'first order learning' focus. First order learning was previously defined as the area of 'learning to learn' or those skills which facilitate more effective information processing by the dysfunctional pupil. The gatekeeping of attention initiates this learning and is followed by perceptual and cognitive skills; lastly, a clearer delineation of a body, iconic, and symbolic autonomous self, leads to the accomplishment of this final phase of first order learnings. The following are examples of some of the educational therapist behaviors as observed in these four domains.

1. Behaviors concerned with attending: Educational therapists working with the severely dysfunctional appear to spend much time, effort and attention on their pupil's attending behavior. Obtaining postural orientation, developing a set for the subsequent task and commenting directly on the product and process of attending is a major teaching event. These behaviors appear to involve the direct interaction between educational therapist and pupil. While the"regular"teacher appears to target on the object to be attended to, the educational therapist focusses on the pupil in the act of attending in a mediator role; the educational therapist provides constant feed - forward and many feed - back clues, in effect, saying, "I am going to be showing you something" and again later, "You have seen this . . .". Within this interaction frame, "I" and "you" is used continuously to label the actors carefully, correctly and circumspectly.

Each action segment is marked by a focus on orienting as well as on attending; in fact the act of attention remains pre-eminent as a major marker signalling the beginning and the ending of each teaching sequence. In this type of encounter the act of attention assumes the same prominent position that greeting and leave-taking would occupy in other encounters. For this reason, the initiation and disengagement phase occupies a very large amount of time of each teaching-learning segment.

2. Behaviors concerned with perception: Educational therapists tend to engage in much socialized perceiving or,in other words,will much of the time be engaged with the pupil's perceptual world in an interactional fashion. Such interaction resembles parental perceptual training behaviors as seen in the shared sensory experiences between a parenting person and a very young child. After alerting and focussing attention the educational therapist will point out the object to be perceived; he comments both verbally and non-verbally on its characteristics in an apparent attempt to obtain consensual validation of their shared percepts. The objects may be described in words, while the non-verbal descriptions consist of gestural and postural clues. This is often accompanied by generalizing statements so that the current experience is tied to other previously shared experiences. This process is reminiscent of Henry's (1965) description of the manner by which a mother shares her world with her infant and suggests that a phenomenon analogous to early sensorimotor socialization may be used by the educational therapist. Such perceptual interaction usually involves various sense channels as well as motor and verbal events so that a multi-modal encoding is provided for each perceptual experience.

3. Behaviors concerned with cognition: Educational therapists who deal with severely impaired pupils slowly and carefully rehearse their cognitive efforts. The therapist shares each cognitive step laboriously and invites the pupil to follow his "trend of thought". Each premise is clearly articulated by the therapist and the antecedents and consequents of each step are separately elaborated upon. This is presented in a tight sequence from premise through middle terms to conclusion. Often the pupil is called upon to proceed forward step by step and then to review retrospectively to make certain he understands how the resulting terms have been arrived at. The educational therapist usually tends to select rather "cool" or neutral subjects for cognitive training, so that interference by anxiety is held to a minimum. The content for cognitive exploration is usually an area chosen for special positive or personal relevance for the student.

4. Behaviors concerned with autonomous self-hood: The educational therapist deals overtly and consistently with the issues of self-hood and otherhood. Comments upon the self, authorship, the transitive or intransitive mode of experience recur frequently. While in other teaching transactions the task or the topic appears to be in the foreground, in the educational therapy transaction issues concerning the originator or the performer of a task seem to be of equal or even greater salience.

Within these four contexts described, the educational therapist uses anxiety reducing messages to maintain or increase the pupils well-being and to help him maintain or regain his emotional composure. This facilitates an optimal attentional and perceptual climate, while

simultaneously increasing selfawareness. Comments such as "You seem to be apprehensive - let's look at what is happening", or "Let's wait until things have settled down with you", illustrates such efforts to provide for a more favorable attentional frame of mind.

Clarification as to whose feelings are involved and what such feelings are often are made as the pupil comes into the dyadic encounter from outside contacts. "Perhaps you are angry at John," the teacher may say when the pupil comes in from the playground accusing John of being angry. "Owning" feelings and sorting them out is a technique which was used by the educational therapist to aid self-definition and clarification and was spontaneous even before their exposure to 'Gestalt' techniques.

The content of a teaching event may often be idiosyncratic for a given pupil, based on his life experience or knowledge-needs in light of his intra-personal needs. A study of metereology, for instance, was started for a child whose language of emotional distress consisted of constant references to clouds, their potential to cause rain or the direction of the wind in terms of its rainmaking potential. A curriculum developed for him by his educational therapist teaching about rain and weather not only provided greater selfawareness and cognitive learning, but also decreased his anxiety and led to greater autonomy through better coping. This idiosyncratic curriculum provided the cognitive vehicle for the management of non-cognitive blocks to learning. Attention and cognitive control was developed as first order learning was accomplished.

SPECIAL CHARACTERISTICS OF THE COMMUNICATION PROCESS

The processes of communication of the educational therapist emphasize references to time and place, as well as states of readiness, feelings, constant references to the person and recurrent direct comments about the relationship such as the roles and rules of the interaction. Feed-back is constantly provided and asked for and "time out" from the task at hand is taken for feed-back periodically. Based on such feed-back, explanation, new or amended instruction or correction is given or requested. A high degree of clarity, clarity about both information and about relationships, is provided. The process of such clarifications and the time necessary to make them is provided for liberally.

Both the statements and gestures of the educational therapists appear more frequently congruent with their apparent intent than are those of the teachers of "normal" pupils. A negative comment made in a friendly and pleading voice, or a rethorical question posed, or a pupil task assigned using the pronoun "we" is found considerably less often than in a 'normal' classroom. The educational therapist behaves as if he assumed that the dysfunctional pupil has difficulty with ambiguity and therefore requires unambiguous communication.

The pupils self-definition appears unaffected by statements of role definitions and contract review. The educational therapist makes overt clarifications and restatements about role perception and constantly reviews the contract between pupil and educational therapist. The educational therapist appears to listen for the relationship aspects of

pupil statements and comments as directly and swiftly on that portion of pupil communication as on the informational content. Such statements are "I am here to . . ." "I see my job here to . . .", "we are to meet here again tomorrow and the rest of the week." These delineative statements also carry time and place markers to re-emphasize and define the time-space coordinates.

Thus, in summary, the salient process aspects of educational therapist-pupil statements are the use of clear relationship and command statements, redundant and thereby allaying doubt and ambiguity about time, role, rule and relationship.

CONCLUDING STATEMENT

The foregoing observations suggest that priorities of time and activity are re-organized in the educational therapy transaction. While communication within this interactional framework consists of similar basic constituents as other human communication, the use of time and the emphasis, focus and frequency of certain maneuvers appear different from other teacher-learner interactions.

SUMMARY

Observational data concerning the interactional behavior of educational therapists with dysfunctional children were presented. In the following chapter a theory is offered to encompass these exchanges in relation to some psycho-educational changes in the dysfunctional pupil.

CHAPTER 5

ASSUMPTIONS BASIC TO A THEORY OF EDUCATIONAL THERAPY

INTRODUCTION

Whereas theories of teacher-pupil interactions covering the domain of higher cognitive skills have been formulated, basic assumptions concerning the modus operandi of psycho-educational interventions in the basic learning tasks are lacking. These are the tasks inherent in the ability to learn in a culture-syntonic style. In our culture this appears to involve the capacity to acquire learning in a social setting among peers and to develop perception and communication styles available for consensual validation. Such learning requires accessibility to external stimuli at given times and feed-back validating such input. Therefore, the question is not that of assessing what the dysfunctional child is learning but what kinds of input may affect his learning. This learning must occur within the cultural context of requiring attention to socialized stimuli and through a processing of perceptions in a consensually validated space-time system.

An interactional theory of educational therapy concerns itself with change mediated by an educational therapist within a context of teacher-student interaction. A process of communication links these two individuals as information is exchanged or, stated differently, as culturally shared realities are perceived. Therefore, an interactional theory of educational therapy must deal with those aspects of the communication which are carriers of this interaction as well as with the basic learning goals if it is to serve the further development of research

and practice. These four learning goals are accessibility and attention to stimuli, perceptual and cognitive efficiency, and awareness of an autonomous self. Attention provides the gateway for letting in information, perception the material for building information, cognition the structure for dealing with information, and self-awareness the fulcrum from which to activate behavior.

A theory of educational therapy must therefore state the assumptions necessary to account for those educational therapy variables which deal with learning behaviors in the context of attention, perception, cognition and self-awareness. For purposes of this study they will be termed the "four learning goals of first order learning."

Those therapist behaviors present when he is working towards the four learning goals are described in greater detail as follows:

Attention

To permit and facilitate entry of information, the receiver must attend to the signal in a focussed and sustained manner; to this end attention itself becomes the prime teaching objective and therefore the subject matter of the educational discourse.

The educational therapist shows the following behaviors found in every educational therapy encounter aimed at strengthening attention:

The educational therapist selects a spatial setting that encourages sensory transmission by positioning himself in the line of sight, close enough for good hearing and frequently close enough for touching. The pupil is also usually positioned in a way to facilitate stimulus reception.

The educational therapist signals to attract and capture attention and at the same time sends information to decrease stress, fear, anxiety and tension. Such signals tend to reduce extraneous attention foci both from within and without the pupil and thereby present the stimulus chosen to be attended to in bold relief.

The educational therapist continually sends signals to the pupil which tend to increase the responsiveness, quality and duration of his attention. This often involves ego enhancing information which is supportive and will re-enforce attention positively. Feed-back about the attainment, quality, and duration of attention is always provided and offered for continuous interpersonal validation. A negative example to illustrate the quality of this behavior would be a teacher who continues to deliver a lesson even if every student in the audience were to be overcome by sleep.

Since the attainment, quality and duration of attention is a primary teaching target, attention-related behavior becomes a major content of the communication. Signals, words, posture, distance, loudness, inflection and gesture are used to gain and sustain focal attention. Information about his state of attention is shared with the pupil, informally at times, or in a behavior modification program using graphs and charts, as quantifiable data. Whatever the nature of this effort, it constitutes a reporting about attention and makes the quality of attention the topic of overt discourse. Continuous feed-back is given to the student to let him know how he functions in this area, implying the educational therapist's assumption that the pupil has control over his attention. The interaction over the issue of attention involves a constant avail-

ability of the educational therapist's attention as the educational therapist must monitor the pupil's current attentional state. The generalization or gate-keeping function of attention seems based on the therapist's labelling the content of what is to be attended to and to facilitate future attention to successfully attained topics.

Perception

'Ordinary' discourse, or discourse beyond the basic educational therapy transaction rarely focusses directly on perception itself, for perception is taken for granted and only regarded as background noise to the figure of the intended discourse. The educational therapist, however, makes perception the figure or focus of the transaction. Therefore, teacher communication behaviors aimed toward this goal involve some specific changes. These signals differ from habitual teaching signals in their emphasis on the basic perceptual data.

To make perceptual behavior the focus of discourse, the educational therapist first brackets such interaction by providing exaggerated clues using posture, voice modulation or any other means to signal the beginning and ending of a message. Punctuating these endpoints serves to delineate the unit of discourse and also assures clearer segments for the purpose of feed-back and correction. The image to be perceived often is outlined in the bold manner of a Miró or Matisse, to avoid a blending, merging or blurring. In addition to this manner of presentation, the issue of perception itself becomes the focus of comment, and may be stated in many sense modalities. Such a multiple restatement of a message not only provides emphasis, but also sends cues in more than one sense modality. In the case of modality deficits, communication is thereby provided in a number of modalities, furnishing an

equivalent to simultaneous translation into various sensory languages.

The educational therapist solicits feed-back continuously and responds to it with amplification and seeks instant correction.

A model for this interaction in the perceptual domain would show the following sequence: the educational therapist gains attention first by alerting the pupil and by helping him to orient toward the to-be-presented stimulus. Then the stimulus is presented in a manner which highlights this presentation and becomes the focus of the ensuing interchange. The pupil's active involvement in dealing with the stimulus is solicited. The usual stance of the educational therapist in presenting a stimulus is that of 'providing' for the pupil rather than presenting it for his own sake. This gesture often is that of 'giving to' rather than 'putting before','submitting to' rather than 'assigning to' the pupil. The educational therapist's communications suggest that data are provided to the pupil for the pupil's use in gestures often suggesting some deference and role submission. This 'making available' requires that the educational therapist present the material in such a way that it stands out boldly as an unambiguous figure stands out from its ground; and he offers himself as an interpreter of the stimulus material.

The pupil's active collaboration is constantly solicited and accompanied by gestural or explicit verbal requests for feed-back. Such feed-back may be in the form of non-verbal acknowledgment, responses involving recognition, replication, or incorporation of the stimulus into another figure. Direct comments frequently involve a mode of feed-back which requires the pupil to show some autonomous responses which will

assure that the percept has been incorporated in his repertoire of responses to augment his sensori-motor world.

Cognition

Intervention in the cognitive domain involves two major thrusts: the area of content and the area of cognitive skills, per se.

Content has both consensual as well as idiosyncratic aspects, one might state facetiously that dysfunctional individuals are more idiosyncratic than others as the learning behaviors of dysfunctional pupils suggest that they may suffer from a greater sensitivity to the idiosyncratic aspects of information. The educational therapist's activities in the cognitive domain involve a constant monitoring of the meanings of content peculiar to a specific pupil. A 'submitting of' content rather than a 'presenting to' the pupil, relabels the teaching relationship into one where the pupil is served rather than subjected to information. Active feed-back is solicited and content modified on the basis of such feed-back.

The difference in content selection or 'curriculum planning' between an educational therapist and the conventional teacher is that an educational therapist evaluates the curriculum on the basis of the pupil's cognitive need system while the dictates of the culture predominate in curricular selection for the 'normal' pupil. Such a need system includes the pupil's pre-occupations, areas of phobic defenses and needed"survival" information. These areas of need-syntonic information may be called the "therapeutic curriculum". Content is therefore used at times as a vehicle for other interactions, such as perceptual or attention train-

ing, or at other times to create information systems to enlarge and enhance the coping repertoire of the pupil to augment his inner and outer survival potential.

The area dealing with cognitive skills is even more intimately concerned with first order learning. Here the content material must be "cool" and readily acceptable to the pupil, so that he can more easily focus on the process of cognition. The educational therapist appears to employ two major approaches: modelling and practice with feed-back by the pupil. In the former approach the educational therapist will reason openly and more slowly. He will perform his cognitive tasks as if in slow motion, articulating each step of both data gathering and of data handling, as if demonstrating the 'how-it-is-done' to the pupil. The pupil is also walked through his steps and helped to check each of them out before going on. This walking through not only provides practice, but also the assurance of safety and interpersonal support.

The breaking down of this process into small feed-back segments not only safeguards correctness of sequence, but also a continuous interpersonal availability. The educational therapist message could be "come let us reason together." It seems likely that such a benign cognitive climate enhances the pupil's security and thus eventually permits him to attempt his own cognitive forays.

As dysfunctional pupils often show much separation anxiety, they may tend to remain "close" to the educational therapist and might need to learn to reason in dialogue; such closeness, besides the possibilities of correctional feed-back, may also allay anxieties about separation and the fear of unknown cognitive territories. Be this as it may, the dysfunctional pupil seems able to rehearse for his own cognitive journeys after such

periods of 'joint' reasoning.

To summarize, cognitive learning seems to be enhanced through the choice of non-threatening or need-supportive content and the modelling and joint rehearsal of cognitive skills.

Self-Awareness

An entire class of interventions seem to be aimed at increasing the pupil's autonomy and self-awareness. As his awareness of self increases, he learns to cope in his socio-cultural setting in a more age-appropriate way. The educational therapist provides an example of 'a teaching-one' with whom the pupil eventually can interact from an "I" position. Here the therapist-pupil interaction is focussed on roles, intent, outcome and evaluation in this process. The pupil's self becomes increasingly more delineated as boundaries of the self and of the other become more clearly defined.

This delineation proceeds as the educational therapist develops for the pupil a concept of the physical self, then of the internalized self-image within certain time and space continuities and finally of an executive self, a self that states goals, develops means towards reaching these goals and evaluates outcomes. Autonomy and identity are the basic issues that are communicated here on all channels of interaction.

Obviously the goals contained in the first three assumptions are basic to the pursuit of autonomy. To receive messages of autonomy, the pupil must attend to these messages data must be processed to decode the message and cognitive sequences are needed to obtain information

in spatial, temporal or causal contexts.

Discussion

Although the activities involved in the four stated learning goals presented are operationally discrete, they are in fact mutually dependent, and in hierarchial order. Attainment of each subsequent goal requires some measure of attainment of the preceding one.

The four assumptions about educational-therapist-originated behaviors deal with specific interactions that appear to contribute to the attainment of specified first-order learning goals. Our knowledge about them is based on the description of observed teaching events. This therapist-pupil transaction is based on a dyadic interaction which is continuously both overtly or covertly acknowledged and defined. As all messages, the messages originating from the educational therapist progressively decrease uncertainty or, stated differenty, clarify information both about shared discourse and the relationship.

Clear and therapeutic communication respecting the issues of attention, perception, cognition and self-awareness are employed in the educational therapist-pupil interaction. To this end, the educational therapist uses clarity and congruence, comments upon roles and rules, giving, requesting and receiving feed-back, and clearly establishes the "I" and the "you" in a totally transparent context of interactional unambiguity. Thus the growth of functional first order learning is nurtured in this matrix of responsive availability within such an open communication system.

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As these messages converge upon the pupil and as he appears to become a more competent learner it seems permissible to speculate that his more adaptive and competent self may derive from his enhanced attentional, perceptual and conceptual functions. In this sense, all his ego functions seem to have been augmented through these psycho-educational messages. Various images of the interactional nature of learning appear to converge here: Mahler's "mirroring" (1968), Henry's "imbueing" (1962), Shand's "knowing together" or "joint consciousness" (1971) and Bowlby's concept of learning as a "changing of set-goals" (1974),become appropriate and relevant.

If further findings substantiate the thesis that certain aspects of the educational therapists' communications change basic learning skills in the dysfunctional pupil, it could then be postulated that educational therapy may indeed provide an autonomous model of therapy. This model would be based on information - feedback paradigms, dealing with the consensual aspects of the real world shared by pupil and therapist.

By implication, educational therapy would surface as a mode of intervention distinct from either dynamic psychotherapy or behavior therapy. While psychotherapy deals with intrapsychic phenomena, behavior therapy with the effector or external behavior of the organism, the domain peculiar to educational therapy would be the processing of interpersonal perceptions. Seen in this perspective, educational therapy would emerge as a third, generic approach to human change. While much

of this accomplishment may be far in the future, the application of interactional concepts is viable now and promises to be productive for the study of educational therapy.

SUMMARY AND CONCLUSION

In conclusion, educational therapist communications, employed in the attainment of first order learning goals for severely dysfunctional pupils, appear to differ from teaching messages sent be teachers of more 'normal' students. The conceptualization of therapist behaviors as observed in the educational interaction compatible with formulations of current communications theory is justifiable as the educational therapist messages appear in certain configurations which in turn appear to mesh with certain patterns of pupil behaviors. The apparent impact of educational therapist messages on the development of attention, on the pupil's perceptual and conceptual world, and on the coping capacity of his self appears as significant correlate of first order learning goals.

Therefore, the following phenomena may indeed represent some of the 'active principles' of these educational events and can be stated as assumptions basic to teaching toward attainment of first order learning goals, for the severely dysfunctional pupil:

1. Constant explicit articulation of the command and relationship aspects of educational therapists' messages affect orientation and attention to presented stimuli.

2. A consensually shared perceptual world is developed through a constant flow of information, feedback, and validation about such joint experience.

3. Conceptualization is facilitated through sequential step-by-step modelling of thinking and in discourse about the process and products of thinking.

4. A sharp focus on pupil autonomy and identity in both verbal and non-verbal channels contributes to the emergence of more competent self functions aided by augmented attention, perception and cognition.

These communication characteristics can be used to construct a framework to account for the behavioral changes in the learning capacity of the severely dysfunctional pupil. Such a framework, it may be assumed, would encompass these aforementioned interactional behaviors of educational therapists instrumental in initiating changes in the first order learning style of severely dysfunctional pupils, and thereby present a step toward a theory of educational therapy.

CHAPTER 6

FUTURE RESEARCH AND APPLICATIONS

FUTURE RESEARCH AND APPLICATIONS OF FINDINGS

Future research is predicated upon the development of currently unavailable tools. Such tools include a refined taxonomy of childhood disabilities couched in terms of both information processing and ego functions, and the development of refined quantitative coding to assess the presence or absence of functions as well as the degree of change in response to certain interventions. Quantitative research into the nature and application of educational therapy may then be attempted and include measurements of disability and functional restoration.

Three major areas for investigation are suggested: one using a treatment-control design, the other observational context-analysis methods and lastly outcome or effectiveness studies. The first approach would involve the application of specific interventions with a measurement of outcomes in treated versus untreated populations. At this time, one of the major obstacles to this approach appears to be the relatively small incidence of severe dysfunction with apparently great individual differences among the probands or symptom carriers. Therefore assembling a significantly large and comparable experimental and control population presents great problems. Yet a large cooperative study on national or international level could provide not only the necessary numbers, but possibly at the same time answer some of the other vexing questions posed by the existence of only small local samples, such as information about differential management practices or cross-social and-cultural problems.

The second approach, the use of context analysis for the further study of the teaching events in educational therapy might be focussed on

two major directions: first of all, toward an establishment of behavioral incidences, timing and duration of therapist behaviors, and secondly in the direction of a refinement of the description of verbal and kinesic events. Such investigations would need to measure not only the educational therapists' behaviors peculiar to the issues of attention, perception, cognition and self-delineation, but also the use of specific communication parameters. Such a focus could further ascertain the existence of patterns peculiar to or necessary for educational therapist behaviors such as congruence, clarity, and overt relationships definition, or the incidence and special characteristics of feedback and correction.

Finally, comparisons are also needed between communication behaviors of teachers of non-handicapped children and educational therapists, and between practitioners who are known to obtain a high degree of 'effective' change as against those educational therapists with less 'effective' outcomes.

A combination of findings both from differential treatment and from context analysis research should provide significant insights into the relevant factors both in a qualitative and quantitative sense, which promote habilitative change in dysfunctional children. Such insights would not only lead to verification or disqualification of the theoretical assumptions offered here, but beyond this, provide the information necessary to develop a proven and cohesive strategy of educational therapy.

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