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ABSTRACT

Four of the seven conference papers treating behavioral and emotional problems concern the Conceptual Project, an attempt to provide definition and evaluation of conceptual models of the various theories of emotional disturbance and their basic assumptions, and to provide training packages based on these materials. The project is described in papers focusing on general overview, rationale, counter theory and dissemination phase, and evaluation. The three other papers discuss anxiety, intelligence, and behavior variables as predictors of learning in disturbed adolescents; the effects of a token system on the out-of-seat behavior of a 7-year-old boy; and academic survival skill training (involving modeling, cueing, and various types of reinforcement) for low achieving children. (KW)

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Exceptional Children Conference Papers:

Behavioral and Emotional Problems

Papers Presented at the

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INTRODUCTORY OVERVIEW OF THE CONCEPTUAL PROJECT

William C. Rhodes

INTRODUCTORY OVERVIEW

I. THE CRISIS IN THEORY

A bewildering and contradictory development has occurred in Behavioral Science. There has been a wide-scale and profuse growth of information about human behavior. We have an overwhelming richness of knowledge about the origins, development, influences; variations and outcomes of behavior. And yet, the very foundation of our behavioral thought seems to be collapsing under the weight of this wildly flourishing accumulation of data and fact.

The profound insights which we owe to such giants as Pavlov, Freud, Durkheim, and others, have yielded a tremendous data pool, but have not eventuated in an organized, disciplined, integrated body of science. Such a state of affairs could be interpreted as a breakdown in behavioral science. It could be said that this vast effort has lacked substance and meaning, and has led only to confusion. However, if we look at the history of established sciences such as physics or biology, we might interpret this condition as an early phase in the development of behavioral science. It can be seen as a stage of fertile chaos, out of which a new, orderly system of thought will develop.

However, a necessary step in this process of development will be the anchoring of the profusion of data, facts, and concepts in a set of logical foundational doctrines. Just as there is a theoretical physics or biology to order, organize and give coherence to the separate and diverse data of these sciences, so there will have to be a theoretical behavioral science to lift the field out of its own chaos and into a discipline of science.

In spite of the glaring necessity for a theoretical basis, the major beneficiaries of such theory as does exist in behavioral science seem to be its most intense critics. Those who are oriented toward problem-

solving, such as the clinicians and the educators, and those who are oriented toward empiricism, such as the researchers and the experimenters, have a common cause in criticism of theory. They seek to bind themselves to method and to facts. They seem to argue that understanding will emerge out of method and facts. They borrow only those bits and pieces of theory that are useful to what they are doing at the moment and let the rest of theory go.

The empiricists and the doers, therefore, may not be bothered by the present uncertainty of theorists. Theory is only a tool, to be used or not used as the need arises. They may not feel the pressure for unifying doctrines. Nevertheless, facts themselves cannot make a science. They must be ordered and organized into a meaningful and useful pattern.

II. THE PROBLEM IN PERSPECTIVE

Emotional disturbance as a human state, condition, or way of behaving has been particularly fertile in generating widely varying explanatory concepts and partial theories over the last half century. Some of these are mere fragments of theory, fragments which are unrelated to any network or system of concepts. Most, however, can be grouped into explanatory systems which are logically related ideas and observations about disturbance. These clusters are not purely arbitrary or artificial. Many of their authors make it clear that their contribution is part of a central school of ideas and concepts. Many not only identify the body of distinctive theory to which they are contributing, but also specify that their school of ideas is distinct from other schools.

One of the first steps in beginning to order and organize these theory fragments is to review the literature. This step has been taken by the Conceptual Project. The following rules[1] for sorting bits of theory before were observed.

(1) Related theories should employ the same basic methodology for any explorations and constructions. (E.g., learning or behavioral theories share the experimental, laboratory investigatory method. Psychodynamic theories share the clinical approach to explanation and exploration.)

(2) Related theories should share a common orienting outlook in examining and explaining human behavior. (E.g., for the sociological theorist all behavior has a social basis.)

(3) Related theories should acknowledge a controlling pre-emptory principle of behavioral genesis (e.g. unconscious motivation, conditioning or learning, biogenesis). This principle is heuristic, demonstrable in many contents, and ubiquitous in the explanatory system built around it. This principle might be called the basic paradigm of the cluster.

(4) Related theories should agree regarding basic ameliorating approaches. (The psychodynamic theorists see psychotherapy and its derivitives as indicated; the learning theorists are biased toward behavior modification.)

(5) Each should have a common ambience within its cluster group. These dimensions come together to form a basic model which place a stamp upon any single, isolated theoretical fragment. While it is possible to identify various combinations and permutations of these schools, each has an over-riding identity of its own.

Each model and its paradigms has evolved through a separate historical stream. Each acknowledges an independent set of ancestors to whom its

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[1] The writer is indebted to Dr. Edward Peay (U-M Working Paper, 1971) for some of the rules above.

stream is particularly indebted. The psychodynamic theorists acknowledge indebtedness to Freud. The behaviorists acknowledge indebtedness to Pavlov. The sociologists, in the area of emotional disturbance, frequently acknowledge Durkheim as the founder of the sociology of deviance. In their day, and in their socio-historical context, each founding father so strongly impressed his point of view upon the field of disturbance, that he determined the broad outline for an independent stream of thought. This does not imply that the separate schools do not also have common historical roots (e.g., psychodynamic and biogenic explanations). But there was a definite historical point at which a departure in thought was established, and this departure led to related exploration and discoveries--only vaguely related to other explanatory systems.

One of the contentions of this overview paper is that these strongly independent bifurcations in conceptions have now matured to the point where logical mergers are indicated. Continued separate and independent development can only obscure and confuse, rather than clarify and deepen, our understanding of the phenomenon of emotional disturbance.

A. Clusters

The separate clusters of thought and action can be grouped in many ways. The paradigms and models chosen in this project have been previously organized by others in much the same way. For our purposes these precedents have been further developed by establishing the rules for clusters of theories mentioned on pages four and five.

The project grouped the theory fragments as follows:

1. Behavioral theory
2. Psychodynamic theory

3. Biophysical theory

4. Sociological theory

5. Ecological theory

B. Counter Theory Clusters

It is recognized, of course, that there are other natural clusters of theoretical statements and ideas with reference to emotional disturbance which could be included. For instance, another distinctive, somewhat independent, cluster of literature and practice which concerns itself with emotional disturbance, and which conforms to most of the criteria for a model in this project, is existential theory. (Husserel and Heidegger could be said to be the founding fathers of this model.) However, because of the growing influence of existential thinking on other models, (such as psychoanalysis, ecological theory and social deviance) and because of its common cause with a distinct group of revolutionary and reform movements, existential theories are grouped under a different umbrella. For purposes of this project this category is called counter-theory, and it includes a host of challengers of current models of deviation.

This cluster of counter-theory ideas and practices cannot be classified as a single model because it lacks the unifying criteria for a model which were discussed previously. Among challengers of the established theories are humanists, counter psychologists, counter psychiatrists, radical educators and counter culturists.

In some respects there is commonality in their challenges. They object to labeling, to attributive sickness or abnormality, and to the implications of the concept of deviance; They also excoriate the culture for its responsibility in creating the condition labeled abnormal. In this respect, they are reformers, with a concern for reformation of the culture

which contributes to and participates in disturbance of some of its members. They are a mixed group, many of whom, even in their distinctiveness could have been included in one of the established models already defined for this project.

For instance, many of the existentialists concerned with human deviation are former analysts---the term chosen by Boss, "Daisanalysis", indicates this influence. Radical sociocultural reformers such as Herbert Marcuse or Norman Brown have definitely chosen the analytic model and its paradigms. Some of the current Gestalt therapists share the underlying perspective of the ecologists. Some of the counter psychiatrists, such as Laing, could be grouped with the psychodynamicists.

However, as a group, these individuals have a common cause in a radical challenge to accepted professional conceptions of disturbance, deviance, and psychosocial disability. Therefore, they are treated here as a group. In doing so it is recognized that this cluster is not as homogeneous as the other schools or models chosen for study. As a group they abhor methodology, they characteristically refuse to reduce their ideas to a preemptory principle of behavioral genesis, and they do not share a method of solution. It might be said, however, that they do share an orienting perspective on human behavior. In general, they seem to argue that all human behavior is to be freed of repressive institutionalization and cultural imposition, and that cultural definitions of abnormality be abandoned.

C. Impact of Counter Theory

What this group of counter-theorists have to say and the way that they say it will require, at the least, a careful rethinking of the outlines and premises of each model. Their challenges may result in radical overhauls within existing models. The kinds of revisions which occur may so alter

the model that it will no longer be recognizable. Another conceivable, though unlikely effect, is that counter-theorist questioning of critical assumptions and principles will lead to a new amalgam or synthesis of models.

This project has concluded that at this time none of the preemptory principles of behavioral genesis in the major models studied has been soundly invalidated by their critics. We have not discovered crucial evidence, logical arguments, nor critical experiments which call into serious question the basic paradigms of learning, unconscious motivation, biogenesis, socio-cultural determination, or ecological interdependence in emotional disturbances. If this statement is true, then any synthesis or amalgamation of models which may emerge at a later date will have to incorporate all of the preemptory principles.

Another conclusion drawn from the Project studies is that the phenomenon of emotional disturbance exists. It is experienced by individuals and by communities of individuals as a real phenomenon. It is not simply an arbitrary grouping of unrelated phenomena, a mere verbal contrivance as claimed by some investigators (i.e., William Scott, 1958). It could, in fact, be concluded that emotional disturbance is a more pervasive phenomenon, more critical human problem than we have hitherto recognized. Each of the separate models have exposed a different facet of the problem, like the proverbial blind men feeling the elephant.

D. Definitions of Emotional Disturbance

Furthermore, the problem of emotional disturbance is a generic societal problem. Its solution is the solution to all derangements in communal life. Emotional disturbance is a distinctive and peculiar human state, having multiple manifestations. It is not simply something wrong in

the organism---which is the disability definition of the problem. It is not simply a confrontation between groups or cultural conventions---which is the deviance definition of the problem. It is not merely an estrangement between the individual and his environing circumstances---which is an alienation definition of the problem. As a distinctive human process, it does involve disability, deviance and alienation. But the ubiquitous problem of emotional disturbance is even more central to human life than any of these single, varied manifestations.

Although the analysis offered in this project does not finally resolve the question of disturbance, does not offer a single, distinctive and critical explanatory system, it suggests a path to be taken toward exploring synthesis of the diverse and separate schools of thought.

The disability definition of emotional disturbance is suggested in many of the psychodynamic and the biogenic theories. The deviation definition is explored in many of the sociological and anthropological explanatory systems. The alienation definition is developed by many of the ecologists and the counter-theorists. Each speaks of a human system in distress. Each locates the distress in time and space within the system. Each speaks of a negative state and negative consequences to the system, and each suggests a method of relief within the system.

In each case, the theories attempt to encompass the fact of painful disjunction in a behavior-environment exchange pattern. Such disjunctions are common to all aspects of communal life. The disability definition looks only at the individual and his personal relationship to the environment and locates the disturbance within the contained system of self-regulating processes which constitutes that individual. The social deviation analysis looks at a second level of system which encompasses the individual as part

of an aggregate relating to the environment. This definition of the problem presents disturbance as disjunction between aggregates and environments. The alienation definition looks at the individual and the social aggregate systems and uses the separation between the individual and the rest of the system as the building block for its explanations.

E. Human-Environment Exchanges

All of the models, then, address themselves to a disrupted pattern of human-environment exchanges. In every case the pattern overrides the disruption and moves continually toward assimilating the disruption, and toward an arrangement of behavior-environment exchanges into a composite whole. This striving toward a whole, toward a maximum patterning of exchanges is expressed in all of the various models.

The basic patterning nature of human-environment exchanges and the taraxis or pain which reverberates throughout the pattern when the exchanges are aborted or disrupted will be the central theme of this report.

IV. THE WIDER USE OF THE FIVE MODELS

In this overview, we have concentrated upon the specific phenomenon of "child variation" within each model. In fact we have reduced our scope even further by trying to examine a particularized condition of child variation, namely, the condition labeled emotional disturbance. In a sense, however, part of the complexity of our task is that each model purports to be a representation of the causes, dimensions, and explanations of all human behavior. For instance, learning theory, from its Pavlovian roots, offers an explanation for all aspects of human behavior. The basic paradigm of learning, which, in the Pavlovian sense, is reducable to a simple history

of bonding between organism and environment, is the preemptory principle from which all human behavior can be predicted and controlled. On the other hand, the Freudian presentation of the psychodynamic model, suggests that all human development and functioning is determined by the basic subterrainian psychic forces and the ways these forces become structured in internal "institutions". The other models are just as all-embracing in building up on one basic paradigm of human life.

Therefore, the models which were investigated as models of disturbance in this project are actually comprehensive explanatory systems. This does not deny that disturbance as a human phenomenon is a dominant concern of every one of the models. There is not a single model which has not included disturbance explicitly as one of the states of human existence which it must explain. This is a very important consideration, because it highlights the universality of this characteristic of human functioning within society.

V. WHAT IS A MODEL?

In this study, several criteria determined the grouping of theory clusters into a model--namely: a common methodology, a common orienting outlook, a paradigm or controlling principle of behavioral genesis, a common solution and a common ambience. The wider philosophical-scientific use of theoretical models should be considered further. The "model" has been a useful construction in science. It has provided a generic vehicle for scientific clarity and order.

Although there is some disagreement among philosophers of science with respect to the general characteristics of a model, this project has accepted, for its own guidance, a distinction made between models and theories by Dr. Edward Peay (1970).

"As commonly accepted in many areas of psychology, as well as in other scientific fields, there is a clear distinction between a "theory" and a "model". Briefly, a model is a representation or abstraction of some features of the "real world" in which elements of the model "stand for" real or hypothesized elements of the real world. For example, the concept of an electrical or magnetic field is really a model of the action of electrical forces, since no such "thing" as a field is assumed to exist, but the concept allows predictions of phenomena which actually take place. Having abstracted features of the real world into a model and made certain assumptions about them, one then makes predictions from the model--deduces implications from it--and then checks whether these implications also correspond to features of the real world. If they do, then the model provides a good representation of the relevant features of the real world, and one can derive information that he did not have before.

A "theory", on the other hand, consists of a statement or group of statements--hypotheses--about the "real world". The check of a theory is whether these statements are true or not. The crucial point about the distinction between a theory and a model is that a theory is true or false, whereas a model is never "false" in itself; a model is an abstract system, complete in itself. A model is useful or not useful depending upon how good a representation of the world it is; i.e., how good are the implications that may be drawn from it. In summary, a theory is tested to find out whether it is true or not, while a model is tested to determine how good a representation it is--how valuable are the implications to which it leads.

However, a given system can be both a theory and a model, depending upon the "reality" ascribed to its elements; it may fail as a theory and still provide a good model. For example, Hebb has hypothesized that "memory" consists of closed neural pathways in the brain, where neural impulses go around and around until called for in recall. More recent work has thrown considerable doubt upon the existence of such pathways as reality, but the concept still provides a fairly good model for memory, because it predicts many of the phenomena that actually occur in recall.

Most of what we have been referring to as "theories" of emotional disturbance or deviance actually fall within the category of theories because they make assertions of the type: "Such and such a set of factors or conditions leads to such and such a behavioral result." For example, "overcrowding produces certain pathological behaviors"; "anxiety follows (or precedes) symptoms"; "learning is produced by the temporal contiguity of stimuli". If they are theories, then some test should be possible to determine whether they are "true" or "false". Unfortunately, such a test is dependent upon how clearly defined and observable the factors in question are. If they are not capable of clear definitions as so many of the factors in this field are not, such a test may not be possible. For example, what is the "stimulus" in a given learning situation? What are "symptoms"? And most importantly, what is

"pathological behavior"? Thus, a test of usefulness for a theory can also be stated: Is it possible to determine whether it is true or not? If not, then such a theory has limited usefulness for any practical application."

VI. OTHER CATEGORIZING EFFORTS

A. Orientation of Researchers

This particular effort to order and organize the existing fragments of theory in ways which can make them available for comprehensive examination is probably one of the largest-scale projects of its kind; but other efforts have been made by individual scientists to collect, sort, organize and categorize theories of disturbance. It is interesting to note that the bases employed by these other overviews for grouping and schematizing theory fragments reflects the basic orientations of the scientists' work.

Siegler and Osmond (1966), as psychiatrically based workers, are very much concerned with treatment, and their organization of theories reflects the applied nature of their work-base. Whereas, the separate efforts of Scott (1958), and Cohen (1966), reflect their university locus and their scholastic orientation.

B. Models of Madness

Siegler and Osmond (1966) have looked at theories from the point of view of "models of madness." They have singled out schizophrenia as their basic referent for madness, because it is such a common diagnosis found in mental hospitals. Since their concern is for hospital treatment of madness, the schizophrenic paradigm is a logical nucleus for their review.

They begin their review by saying that the vast array of explanatory concepts of schizophrenia seem to share in the phenomena they are describing.

Many explanatory systems are described: biochemical, genetic, religious, psychoanalytic, sociological, cross-cultural, interactional, legal, moral, etc. The theories, while they display internal consistency, lack any comprehensible relation to each other.

The two authors attempt to develop a basis of comparability. They acknowledge that theorists are not required to compare their theories in a particular field of endeavor with theories in other disciplines. However, since madness is not only a scientific problem, but a problem with wide ramifications in everyday life, it becomes important to bring about scientific order to assist in the social order. The problem of madness, they say, has moral, legal, medical and social implications, and is, therefore, a problem of vast social importance.

Siegler and Osmond's point is well taken. The problem of disturbance has, in the past, stimulated an impressive array of resources, facilities and social institutions. Some of these structures and organizational forms are directly derived from the conceptual model employed For instance, during the days in which the concept of "demonic possession" held sway, vast church facilities and personnel were developed; during the reign of moral-legal conception, vast correctional paraphernalia was created; during the current medical bias reign, huge hospital and clinical centers were developed These organizational and conceptual structures still exist in our society. In some cases two of the alternative conceptual models can be seen existing side by side in the same structures. One sees the medical-psychiatric and the correctional model existing side-by-side in such former "correctional" institutions as Wiltwick School, or Hawthorne Cedal-Knoll, and in the federal drug-treatment facility in Lexington, Kentucky. There are also instances where two competing explanatory models lead to diametrically opposed treatment

of the individual in the same setting as described in the early Ayllon and Michaels (1959) paper on the nurse as a behavioral engineer. A patient's schizophrenic language was being discouraged through the behavioral method of non-reinforcement on the ward, while, at the same time, this same schizophrenic language was being encouraged by the case worker whose psychodynamic approach led her to listen very intently to all of this illogical outpouring.

In their analyses they compared schizophrenic models along the dimensions of diagnosis, etiology, interpretation of behavior, treatment, prognosis, suicide, function of the hospital, termination of hospitalization, personnel, rights and duties of patients, rights and duties of families, and rights and duties of society.

They classify their models of madness as: Medical, Moral, Psychoanalytic, Family Interaction, Conspiratorial, and Social. Within each model they examine the dimensions already listed (i.e., diagnosis, etiology, interpretation of behavior, treatment, etc.). Each of the models conforms to the title given it. The conspiratorial model is the only one which may not be self-explanatory. This model is based upon the fact that many families extrude a family member by conspiring to hospitalize that particular person.

C. Levels and Types

Cohen (1966) has also examined the abundance of theories of emotional disturbance and has developed an ordering schema upon the basis of "levels," and types." He groups all theories into two explanatory levels: the sociological and the psychological. At the sociological level actions are not only events in the biographies of individuals---things that individuals do; they are also events located somewhere in the social system or structure---in a family, a neighborhood, a city, a region, an organization, a country.

Different kinds of deviant acts are variously distributed within a given social structure and these distributions differ from one time to another and from one structure to another. From this perspective, therefore, it makes sense to ask: "What is it about source structures---their organization, their cultures, their histories---that accounts for differences within and between them?" For instance, in relationship to suicide, Durkheim noted that each country, each major region, and population segment has its own characteristic suicide rate and these rates are remarkably stable. It seems clear, then, that suicide is a property of the system, that there is something about the society, the region, the group, that generates its characteristic suicide rate. Such regularities of patterns are true of other deviant actions. What are the properties of the system that account for this property?

In general, whatever these properties are, they determine the behavior of the system through their impact upon personalities, the situations in which they operate, the conjunction of personality and situation, and the interaction processes between them.

The other theoretical level, the psychological level, attempts explanations of behavior by focusing upon the actor and motivational mechanisms. There are at least four distinct emphases among theories at the psychological level: (1) those theories that emphasize the actor and assume that most of the variance can be accounted for in terms of differences on the actor side; (2) those that emphasize the situation, and assume that people who commit deviant acts are not special sorts of people. Rather, anybody given the proper circumstances might do the same; (3) conjunctive theories, or theories that emphasize the conjunction of both actor and situational variables in determining the deviant act. In these theories, deviance is the outcome of interaction between actor and situation, but the interaction is treated as a

single episode; (4) interaction process theories, which, like conjunctive theories, emphasize the interaction process, but the deviant act develops over time through a series of stages. At each decision point in time the actor may choose among two or more possible directions. Which direction he will go depends on the state of the actor and the situation at this point in time, and either or both may have, meanwhile, undergone change.

For Cohen, psychological inquiry is concerned with identifying variables and processes involved in the motivation of deviance and conformity and with constructing exact theories about the interrelationship. Sociological theory is concerned with identifying the variables and processes in the larger social system that in turn shape those that are involved in motivation, and that determine their distribution within the system.

D. Definitional Approach

William Scott (1958) used still another composite model of theories of emotional disturbance. His definitional approach compares and organizes theories and theory fragments along definitional lines. His careful analysis collects, sorts, and groups the research definitions of mental illness and mental health which he culled from existing literature. His categorical schema is organized as follows: (1) exposure to psychiatric treatment as a definition of mental illness; (2) social maladjustment as defining mental illness; (3) psychiatric diagnoses as definers of mental illness; (4) subjective unhappiness as the criterion for mental illness; and (5) failure of positive identification as the index of mental illness. Each of these separate criterion variables has been used in research studies of mental illness. Scott reviewed most of these studies and provided a critical

discussion of the adequacy of each definition. He then summarized the differences among the definitions by indicating their divergent approaches to certain basic problems in the conceptualization of mental illness and mental health.

He pointed out that underlying the diversities in definitions of mental illness one can discern certain basic differences of viewpoint concerning how the phenomenon should be conceptualized. He abstracted the major foci of disagreement and contention among definitions in the following questions:

1. Does mental illness refer to a unitary concept or to artificial grouping of basically different specific disorders?
2. Is mental illness an acute or chronic state of the organism?
3. Is maladjustment (or deviance from social norms) an essential concommitant of mental illness?
4. Should mental illness be explicitly defined according to values other than social conformity?

The different viewpoints in each of his six classes of definitions take one side or the other on these basic questions concerning the nature of emotional disturbance.

In summarizing the collected research evidence for each of the various categories of definitions, Scott points out that the dependent variables employed in empirical research under each category are clearly different, and the conceptualizations involved in the empirical criteria are often divergent. He notes that the research findings show certain basic incompatibilities among the various conceptions and approaches. He says that it is a moot question as to whether or not these incompatibilities should be reconciled by further theoretical and empirical explorations. Perhaps, he suggests,

they may be regarded as valid indicators that mental health and illness constitute multidimensional phenomena.

E. Need for Further Exploration

This project is a refutation of the implication that further theoretical explorations of possible reconciliation should be abandoned. Even if the professional and scientific community abandoned the problem of emotional disturbance, the society would not. It has been a long-standing, constantly urgent problem of communal life. Society has devoted a major share of its energies over centuries to the control of this phenomenon in its many guises, whether it was considered wickedness or sickness. Society will not abandon it because it cannot abandon it. As Freud said in his treatise on Civilization and its Discontents, "The fateful question of the human species seems to me to be whether and to what extent the cultural processes developed in it will succeed in mastering the derangements of communal life caused by the human instinct of aggression and self destruction." Man now knows that his problems lie in the human psyche, that the current threats to his survival are psychological and not physical threats.

While the Project would agree with Scott's suggestion that emotional disturbance constitutes a multidimensional phenomenon, it concludes that the phenomenon might be seen as having a unity of its own which underlies all of the psychological pain of societies. Far from being a distinct deviation in life-style, on a par with other deviations, such as delinquency, retardation, drug-abuse, suicide, etc., it is a basic process involved in all of the varied psychosocial sufferings in human systems.

It is argued here, therefore, that it is understandable that such a basic phenomenon should present itself in such a multitude of guises. This conclusion emerged late in the Project, after we had laid out all the pieces of theory and fact which overwhelmed us with theoretical implications.

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RATIONALE FOR THE CONCEPTUAL PROJECT IN MODELS

OF EMOTIONAL DISTURBANCE

Spencer Gibbins

Programs for emotionally disturbed children have been described as insufficient, piecemeal, fragmented, and as not serving those in need (Joint Commission on Mental Health of Children, 1969). An overview of the field reveals great diversity in the methods used for identification and treatment of disturbed children as well as the basic assumptions underlying the concept of "emotional disturbance." Theoreticians in the field run the gamut from an orthodox psychoanalytic viewpoint (A. Freud, 1965) to an orthodox behavioral or learning theory model (LoVaas, 1965; Ferster, 1962) with many writers occupying positions somewhere along the continuum established by these polar approaches (i.e., Knoblick, 1966; Morse, 1967; Hewett, 1967).

Recently, even this rather extensive continuum of approaches has been challenged by several writers whose viewpoint cannot be identified with any traditional school of thought. In general, these approaches tend to challenge basic assumptions concerning the etiology and/or treatment of emotional disturbance shared by the diverse pathology-centered approaches (i.e, Rhodes, 1967; Szasz, 1961: laing, 1967). This diversity of viewpoint amid the traditional schools of thought when complicated by the challenges or cross-currents evolving in the field tends to result in a bewildering and complex body of literature whose utility in program implementation decreases in geometric proportion to the complexity.

Educational programs for disturbed children are sometimes regarded as an integral part of a theory of distrubance (Ferster, 1962) and sometimes as an ancillary service to a therapeutic program (A. Freud, 1965). Morse, Cutler, and Fink (1964) reveal that the lack of any systematic approach in education reflected confusion in the literature. These writers conclude that "...researchers and practitioners together have a heavy obligation to provide a solid conceptual system for the understanding of psycho-educational problems, and such a system manifestly does not exist at the present time."

Recognizing this need for a systematic conceptualization of the various approaches in the field, the Special Projects; Program Development Grants, Preparation of Professional Personnel in the Education of Handicapped Children (August, 1968) manual expressed a concern for this lack of development and evaluation of innovative programs. Yet the upgrading of training programs preparing teachers for disturbed children and the resultant servicing of these children by the school demands a systematic clarification of the various theories and programming alternatives available and an evaluation of their efficacy in implementation.

Objectives

The objectives of the Conceptual Project were:

1) To provide a vehicle for collaborative efforts between theoreticians and practitioners in the field of emotional disturbance with a goal of conceptual clarity;
2) To provide in a systematic manner, conceptual models of the various theories of emotional disturbance and their basic assumptions;
3) To introduce in a systematic manner the emerging criticisms or challenges leveled at each of the existing conceptual models;
4) To generate training packages of the above materials which could be broadly and flexibly used in university and state department training programs; and
5) To involve some of the trainers of teachers of the emotionally disturbed in the process of explicating the conceptual models and the interventions which each model espouses.

In order to accomplish these objectives, the Conceptual Project was planned to be carried out in two major phases--a research phase (including a validation of results) and a dissemination phase. The literature sample taken in the research phase was accomplished using advanced doctoral students as researchers. These individuals also acted as liaison between "experts" or theoreticians in the field and the project. After research results were compiled, they were added to such materials as a "master bibliography" and prepared for use in the dissemination phase.

A workshop format was chosen for dissemination efforts in order to present the prepared materials in an active participatory atmosphere. The problem

of determining the amount of structure for these workshops (how much time should be directed by the materials and project staff and how much time by the participants themselves) was solved through the use of "trial workshops" held in the State of Michigan. The workshops were so structured as to provide individualized exploration of the materials, a somewhat structured overview or synthesis and an opportunity for participants to adapt the materials for their own use.

Each of these specific phases will be described by the papers presented in this convention session.

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THE COUNTER THEORY AND DISSEMINATION PHASE OF

THE CONCEPTUAL PROJECT

Michael L. Tracy

The Development of the Counter-Theory Area.

During the first year of the Project, as the task of reviewing the body of theoretical literature got underway, it bacame apparent that a great amount of conceptualization about deviance and disturbance would not be reflected within the span of the five traditional schools of thought selected. The most central characteristeic of the conceptualization done outside the mainstream currents of the literature was its questioning posture. The questions center about such areas as innovative practice, third world politics, and existential philosophy. Upon the recommendation of the Project's advisory panel, the Project staff undertook to review this critical "counter-theory" area.

The Conceptual Project was fortunate in securing the consultation of a leading "radical" special educator when Matthew J. Trippe returned to the University of Michigan. Professor Trippe consulted extensively with the staff in determining the parameters of "counter theory," in selecting the prominent writers, and indeveloping counter theory as a highlight of the Project.

Examination of the counter theory area led the staff to feel that its position may well be a touchstone for future developments in the area of child variance. For this reason, more resources of the Project were allotted to the area than for the other "traditional" areas. Two staff members were assigned responsibilities in the area, extensive consultation with Dr. Trippe was secured, and plans for a counter theory workshop were projected.

As the parameters for the review and position papers were set, several issues were identified:

(1) Does counter theory reject the concept or utiltity of theory, per se, in favor of practice or experience?

(2) Does counter theory already exist as a dialectic within each of the traditional domains?

(3) Does counter theory attempt to develop a new body of literature outside existent conceptual information?

The nature of the first question precludes a response. The second question may bee valid, and, if so, these emergent "radical" aspects of the traditional thought could and should be covered in the reviews done of those areas. Thus, the major parameter in the counter theory reviews was seen to emerge as the review of a body of literature which moves beyond mainstream thought about disturbance or behavior.

Even this parameter could be seen from two perspectives--those writers who would modify present thought about deviance in a radical manner, and those writers who reject present thought "in toto" and are developing alternative revolutionary positions. Both groups seek the goal of a more humanized, actualized individual as the response to deviance or disturbance and both these positions were found within the thought of the Project staff.

A second dimension concerned itself around a parallel problem--those writiers who were concerned with developing a tolerance for or even encouragement of "deviance" and those who will develop alternative socializing and social structures to eliminate the causes of "deviance."

As the literature review was undertaken, the task was divided between two staff members along these two issues. One reviewer assumed responsibility for that area of the literature oriented toward reform and the elimination of the causes of deviance, a clinical stance, while the other surveyed those writers speaking of "revolution" and the "celebration of deviance" in a rather pragmatic or behavioral manner. As the reviews were undertaken, a third issue became evident in distinguishing between the two reviews. The styles of the authors differed in that the "clinical" paper attempts to take the reader through the subjective expanse of the professional immersed in the counter-culture while the behaviorally-oriented paper attempts to review the area in an objective manner.

The Literature Samples.

Following the procedures established by the earlier efforts of the Project which explored the areas of traditional theoretical thought, a literature review was undertaken to identify and assemble a representative sample of "counter theory" thought. After surveying a very broad spectrum of diverse materials, each literature review was edited and a "position

paper" written to describe the literature samples. Two such papers were produced: "Some Strands Within Counter-Theory," portraying the thought of those writers speaking from a clinical viewpoint, and "Conceptual Models of Emotional Disturbance: Some Other Thoughts," representing those writers who see themselves primarily as pragmatists.

One procedure used to assess the validity or representativeness of the literature sampling was the review of the papers by several of the counter-theorists themselves. The two position papers were sent for advice and comment to writers prominent in the field such as Thomas Szasz, Paul Goodman' Ivan Illich, Philip Shaver, and Barry Stevens. Though not all of these reviewers responded in written form they were given the opportunity of expressing their comments by telephone. The comments gathered in this way in addition to the extensive critical discussions held among the Project staff and with other members of the university faculty were used to revise these papers. These papers were then used as stimulus materials for the counter theory workshop and for use in the dissemination phase of the Project.

As in the mainstream reviews, a small group of experts was called together in a workshop format to further develop the counter theory position and its relatedness of the mainstream positions. This workshop differed in that the role of special education is potentially unique in the counter theory development for it is the special educationfield which is assigned the responsibility for the disturbed or deviant. Special education must choose either to follow mainstream thought--the custody or remediation of the deviant, or counter thought--the appreciation for and celebration of deviance. To highlight this issue, the workshop was structured to include a prominent spokesman for the counter-culture as a whole as well as a sampling of those writing in special education who seek radical change.

The goal of the workshop was to develop further a counter position to mainstream conceptual thought about disturbance and deviance in children. Specifically, the objective was to finalize the review process by supplying a discussion of the critical issues in the counter theory position as they relate to special education.

The workshop staff set three rules of thumb in order to deal with the content and process of the counter theoretical positions in a manner useful to teacher trainers:

(1) the process of the position could only be communicated through interpersonal contact, so the informality and intimacy of the initial session was essential;

(2) there were to be some tangible content issues defined; and

(3) the conference was recorded on video tape so as to be useful to the ultimate audience for it.

The following procedure was the outgrowth of a discussion between Project staff and those selected to participate in the workshop:

(1) It began with an informal group meeting with an unstructured format.

(2) Secondly, there was a session which provided a transition to a more content-oriented discussion. The staff reviewed what had been done with Matthew Trippe, special consultant, in preparation for the conference. Then, the group commented on this and moved on to consider issues within the counter theoretical position. Another session of the day involved two or three small groups of rotating membership between the consultants and the staff. The purpose of these groups was to identify and elaborate upon the existent counter-theory issues. Time was later provided for individual review.

(3) Lastly, there was a discussion by the entire group of issues identified at small group sessions discussed above.

The efforts of the Conceptual Project in the area of counter theory include:

(1) The position papers. Major papers representing descriptions and samples of counter theory were produced. The coverage by these basic papers was significantly increased by the addition of Everett Reimer's paper, which not only states the case against institutional schools but also generates the alternatives to these institutions, an asset not usually found in "protest" literature.

(2) Individual interviews. Video-taped interviews in which conference participants responded to a predetermined set of questions about their perception of counter theory were produced. These tapes include interviews with Peter Knoblock, Matthew Trippe, Herbert Grossman, and Everett Reimer. These taped interviews are in a for-

mat compatible with the previously developed interviews.

(3) Group discussion. A videotaped discussion of the above experts with the staff of the Conceptual Project was held concerning the critical issues found in the counter theoretical position.

The Dissemination Phase of the Project.

The product of the Conceptual Project could have maximum usefulness to the field only if it were carefully programmed into a training form and disseminated among Directors of Training throughout the country. For this reason, a major effort was undertaken in the project to organize the current project material into a curricula form and to conduct conceptual workshops with trainers in all regions of the country.

The dissemination phase of the Project had three objectives:

a. the distribution to special education personnel of information compiled by the Conceptual Project in a usable form;

b. the establishment of continuing communication channels between developers of theory and practitioners in the field; and

c. the development of innovative methods of teacher training in order to instill a commitment to the utilization of theoretical principles in the design and evaluation of special education programming.

To operationalize these objectives, a target population consisting of training directors of programs preparing teachers of emotionally disturbed children and personnel in the State Departments of Education responsible for public school programssfor disturbed children was selected. These were the persons in charge of training teachers, establishing and supervising programs and exercising influence regarding certification procedures.

The primary task of these objectives was the translation of theory about variation in children into a format which is acceptable and usable to teacher trainers. To accomplish this task, the following subtasks were accomplished:

(1) the translation of the material developed by the Conceptualization Project into a format useful for teacher trainers and the design of specific methodologies in translating the Project into classroom practice;

(2) the design and execution of a training program for teacher trainers in the form of regional workshops as a vehicle for dissemination

of developed materials and as stimuli for programmatic innovation based upon theory; and

(3) the evaluation of each task of dissemination.

Translation.

A wealth of information had been compiled, ordered, and organized by the staff of the Conceptual Project in the past year. The task was then the translation of these materials into a format useful to teacher trainers. These tasks were to be accomplished without the distortion of the material or loss of its intrinsic concepts.

The materials collected regarding each of the "models" of disturbance (psychodynamic, behavioral, sociological, biogenetic, ecological, and counter-theoretical) was reorganized, edited, and translated into curricula form.

A second curriculum task of the staff in the fall was to determine how teacher trainers can use the theoretical and atheoretical conceptualization outlined in the literature samples in an overview or framework format. The original papers were available as the primary resource. The curriculum guide developed from this assisted the participant in translating the primary resource material into an individualized and professionally appropriate format. Once such a format for utilizing theory was established, teachers and teacher trainers found material to be a valuable tool in problem-solving.

A third editoral task was coordinated with evaluation and assessment. In trial workshops the curriculum guide were tested. After each trial use, the curriculum guide was examined for inadequacies, omissions, and errors. Appropriate additions were made to the guide as it was re-edited. This process of field testing and revision was crucial to the development of operationally effective curriculum packets.

Workshop.

The vehicle for dissemination was a series of regional workshops. By presenting the conceptual materials in an active, participatory format designed to develop specific methodologies, the participants gained not only the didactic materials but also learned the process of utilizing it in problem solving situations. In order to foster the creation of innovative methodology using these materials, they were presented in such a manner. Criticisms and suggestions concerning the Workshop design were solicited from each of the

teacher-trainer-consultants previously utilized by this Project. After these suggestions were incorporated, the design and materials were field-tested:

(1) by utilizing them in a regularly scheduled teachers-in-training course at the University of Michigan;

(2) by incorporating them in a doctoral theory course at the University of Michigan; and

(3) by running "trial" workshops for local school district special education personnel in the Ann Arbor area.

Each field trial produced evaluative data to be incorporated in the refinement of the workshop agenda.

The workshops were distributed across the nine regions delineated by the United States Office of Education's Regional Project Research Grant Program during the months of January-April, 1972. For example, the first workshop served Area Five and included Wisconsin, Michigan, Illinois, Indiana, and Ohio. The workshops solicited all teacher training programs preparing teachers of the disturbed to send their training director. Each State Department of Special Education was invited to send a representative whose primary concern is programs for the disturbed. Such workshops were held in SanFrancisco, Kansas City, Detroit, Atlanta and Boston.

Rather than make dissemination a direct function of the project staff, selected members of the field (i.e., local teacher trainers) participated in the dissemination effort. This is done for three reasons:

(1) field personnel have a greater appreciation and need for conceptual clarity in programmatic problem solving;

(2) only field personnel can justify the content of presented or projected conceptualization in terms of practical needs; and

(3) the utilization of field personnel so the dissemination workshops are established as a continuing vehicle to promote conceptual clarity rather than solitary effort to transmit our specific findings.

The movement of the field in the direction of conceptual clarity can not be achieved by spoon-feeding our conceptual models to a subset of the potential consumers. Conceptual clarity can result from the utilization of the project's conceptual models; however, they represent only a beginning. The process of applying this information to the problems presented by the

field can provide a basis for presenting conceptualization by problem-solving. Conceptual clarity can help in problem-solving when it is applied to a problem by the individual who is accountable for problem solution.

Three individuals from each Workshop Region were trained at a special workshop held in Detroit in January, 1972. Their responsibility in these regional workshops included:

(1) their role as the liaison between the project and the region they represent in such activities as conference preparation, evaluation, and follow-up;

(2) their introduction of workshop format and faculty at the Regional workshop; and

(3) their role, along with the permanent Center faculty, as small group leaders within the workshop.

Format of the Workshop.

The nature of the Workshop was such as to dictate correspondence with the participants before the actual two-day session. Each participant was contacted early in the fall so that they could be informed of the tasks involved in the Workshop.

The compiled reports of the Conceptual Project, including the proceedings of the Counter Theory Conference were mailed in advance. Intermediate mailing also included:

(1) An overview of the Workshop--its goals, history of the Project, etc.;

(2) The Workshop Portfolio.

The Workshop itself (see attached agenda, goal statement and schedule) was organized into two days of activity--one day of "input" and one of "output". An overview of the history of the Project and the task of the Workshop was given and the guidelines and materials for the Workshop discussed. The participants were assigned to discussion groups of approximately nine members which were the primary working units of the Workshop. Discussion following most presentations took place in these small groups. Workshop activities centered about two main tasks--that of free exploration of compiled materials and of developing ways of using the materials.

After the exploration of materials, efforts to synthesize the theories were described and the utilization of theory in practice explained. The format for the "output" sessions were described and the discussion groups formed to

generate data about their particular Curriculum Development Tasks (CDT's).

The Workshop ended with an evaluation session utilizing both evaluation-oriented discussions of the small groups and the completion of evaluation forms prepared by the Project staff.

Follow-up.

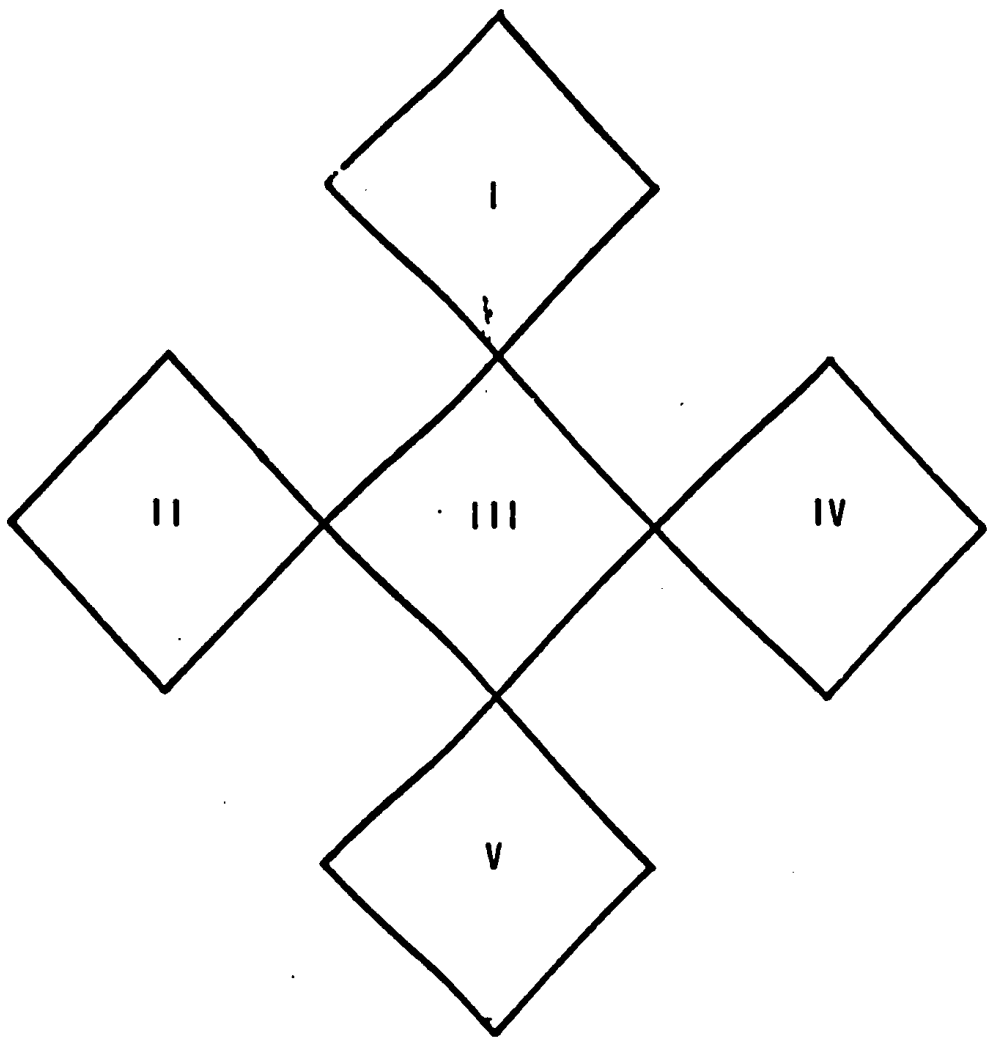
Participants in the Workshop are involved in a follow-up procedure initiated at the Workshop and executed through the regional liaison faculty. Suggestions for similar Workshops to be given by the participants to their colleagues or students will be given by the Workshop and evaluation forms provided. Programmatic interventions flowing from the Workshop may be identified and suggestions for evaluation given to professional organizations, such as the Council for Children with Behavior Disorders.

Cooperation with University research facilities will be sought with the idea of stimulating them to provide more adequate methods of promoting evaluative research from a theoretical base. Thus, theoretical models may be influences by data recovered from interventions in the field.

The format of the Workshop is seen as prototypical in nature and should serve as a model for the execution of similar efforts by Workshop participants, either on an inter-university scale, withing a teacher-training classroom, or as an in-service training program. Materials for such efforts will be provided and Center members will be available for consultation in planning. The Center staff will attempt to refine the materials used in the workshops for use in a "Workshop Package" which would provide all materials and instructions necessary for executing such training efforts.

Attempts to reach personnel in the field outside of those attending Regional Workshops will be made after all such workshops are held. These dissemination efforts will be made primarily through presentations to be made through the auspices of professional organizations (i.e., a CEC convention activity, a workshop sponsored by CCBD, a paper read at APA).

CONCEPTUAL PROJECT



PHASE I. INTRODUCTION.....to the project.....to the staff.....to the materials.....to the tasks. INTENT: to get off on the right foot.

PHASE II. EXPLORATION.....of materials.....of the video tapes.....of your personal response.....of others' personal responses to the materials. INTENT: to acquire the bits and pieces needed to assemble new knowledge.

PHASE III. SYNTHESIS.....a presentation by Dr. William Rhodes giving an overview of the scattered theories and a pattern for synthesis. INTENT: to start the process of assembling the bits and pieces.

PHASE IV. UTILIZATION.....of materials.....of concepts.....of models..... of insights.....of whatever has been gained during the workshop ..... towards your own program. INTENT: to finish the process of assembling new knowledge by using it; to provide a tangible take-home product.

PHASE V. WRAP-UP.....to review.....to summarize.....to project in the future. INTENT: to finalize the workshop experience and to lay out future plans and involvements.

CONCEPTUAL PROJECT IN EMOTIONAL DISTURBANCE

GOALS AND OBJECTIVES

Dissemination Phase

GOAL 1: Interchange of information.

Means:
- A. Distribution of theory papers to teacher trainers.
- B. Distribution of feedback results.
- C. Participation of teacher trainers in Conceptual Project Workshops.
- D. Distribution of Workshop products to subsequent Workshop participants.

GOAL 2: Change in conception or process of training programs, toward increased clarity and theoretical consistency.

Means:
- A. Use of Project materials in training programs.
- B. Use of theoretical positions in preparation of proposals.
- C. Use of theoretical convepts to reorganize training procedures.

Conceptual Project Workshops

GOAL 1: Interchange of information.

OBJECTIVES:

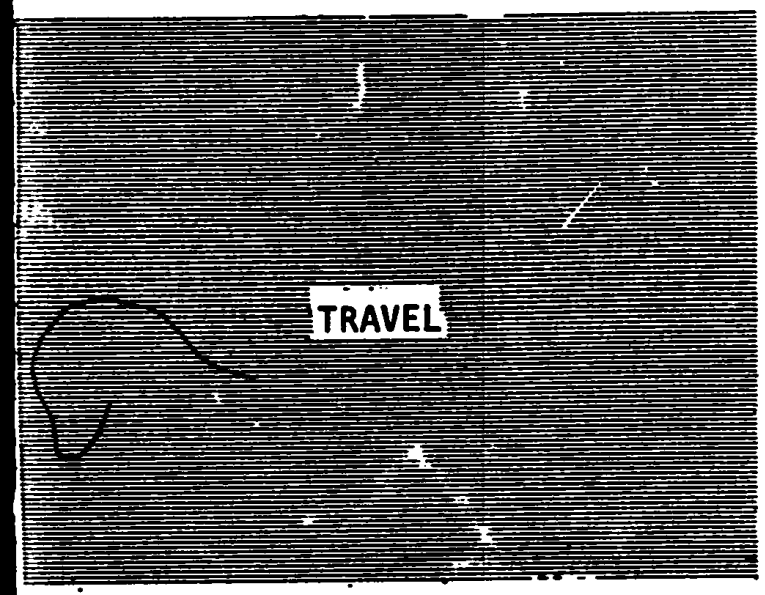
Day 1 P.M. / Day 2 A.M.
- A. Participants will explore Conceptual Project materials, given a multi-media presentation format.
- B. Participants will evaluate the materials for use in their own training programs.
- C. Participants will discuss the materials with their colleagues.

GOAL 2: Change in conception or process of training programs, toward increased clarity and theoretical consistency.

OBJECTIVES:

Day 2 P.M. / Day 3 A.M.
- A. Participants will restructure their own training programs on the basis of the Conceptual Project materials.
- B. Participants will use and discuss the Conceptual Project itself as a model for innovative change.
- C. Participants will evaluate the workshop experience in terms of the utility of the experience.

DAY 1



LUNCH

INTRODUCTION

to the Workshop

EXPLORATION

of materials

(small groups)

DINNER

Informal Workshop Activities

DAY 2

EXPLORATION

(Independent)

COFFEE

SYNTHESIS

Group Presentation by

Dr. Rhodes - Group Discussion

LUNCH

UTILIZATION

Relating Theory & Practice

(Small groups - idea generating and sorting)

COFFEE

UTILIZATION (Cont.)

(Small Group Discussion)

Preparation for Day 3 Task

DINNER

Informal Workshop Activities

DAY 3

UTILIZATION (Cont.)

(Small group/individual)

Final Products

Open Discussion: Theory, Practice, and Teaching

WRAPUP

Discussion of

Workshop Experience

LUNCH

EVALUATION OF THE CONCEPTUAL PROJECT

Sabin Head

Introduction: Evaluation and Science.

Evaluating is one of the many ways in which we try to understand what we do and what nature is about. In the attempt to find a place for evaluation on the Conceptual Project, we found that we have to go back to fundamentals. Education as a field does not run on evaluation the way some enterprises do. Evaluation has become synonymous with tables, graphs, figures, obscure statistics, and a feeling of cover-up activity.

Evaluation's goal is our view is identical with the general goal of science: to "understand" nature. For the great 19th century scientist Louis Aggasiz this meant to "go to nature, look, feel, see for yourself." We have taken the reverse of this as a simple rule of thumb, that if you are impressed by a statistic or statement you don't understand, you're being buffaloed. We are all being buffaloed some of the time.

Evaluation's goal is understanding; our human problem is that our capacity to understand is inadequate to the complexity of the world about us. It is an open secret that when we say we "understand" a phenomenon what we mean is that we understand our model of it. For the purposes of our understanding, simplicity is a virtue in models: those models with the fewest variables and with the simplest relationships between them are the easiest to understand.

Many if not most of the phenomena of interest to us are complex. Fortunately, science has repeatedly found that complex systems of relations are highly redundant and that it is possible to formulate simple models that exploit some of the redundancy. Complex systems of relations with no redundancy, of course, cannot be adequately represented by any model of less complexity, so they may be their own best representations.

Perhaps the best example of a model is a doll. Only a few of the features of the thing being represented are retained. Which features are retained depends on the use to which the model is to be put.

For the purpose of prediction and control, our models have to have an internal relational structure that allows predictions to be derived

or calculated. In fact, it is generally to such an internal relational structure that we refer when we say we really understand something. Our understanding, however, is nothing more than an "as though" formulation and has no monopoly on the "truth." The world is seen to behave as though our model were true. In principle, an infinite number of models could fit our finite data, just as an infinite number of mathematical functions could fit a finite set of points. There is nothing paradoxical about incompatible "understandings" of the same phenomena.

Science deals with recurrent events: it is scientific faith that says they will continue to recur and scientific methodology that provides a description of them. Models, however, deal with the relationships between the events. For purposes of simplicity, models often deal with relations between unobservables, such as force and mass in physics. Models dealing with simple relations between unobservables, intended to exploit the redundancy in more complex relational structures, will naturally differ in their adequacy to the phenomena and also in their generality across phenomena. In the face of this, understandability must still remain a primary criterion.

Trying to deal with the three criteria of understandability, adequacy and generality explains why we deal with highly simplified laboratory behavior in experiments. Often a second kind of simplicity arises: at the end of minute study of precisely controlled laboratory behavior we arrive at conclusions that the man in the street already "knows." In defense of this simplicity, two things must be pointed out: first, that not all that the man in the street "knows" turns out to be verifiable in a laboratory and second, that some things turn up that are not intuitive. Beyond this defense, however, there is a deeper consideration. A secondary goal of science is to ensure that the understanding attained is capable of being used to extend itself. It is not enough to understand single phenomena item-wise, we want to be able to use our understanding in long chains of reasoning. If a research project is thought to be fruitful, it is probably because it has met with some success in this second, longer-range goal. Intuitive knowledge is typically more bound to the immediate situation.

To repeat, then, our goal in evaluation is understanding. The

major obstacle is that our capacity to understand is limited and reality is complex. For this reason we deal with simplified models of reality. The difficulty in this approach is simply that of formulating the model appropriately. The objectives to keep in mind in formulating a model are: first and foremost, understandability. Second, adequacy in representing reality, third, generality. These criteria are mutually contradictory and any model represents a compromise.

The Place of Evaluation.

As a form of feedback evaluation fits somewhere between experimentation and quality control. The purpose of experimentation is to provide feedback on speculation. The purpose of quality control is to maintain the standards of the status quo. The purpose of evaluation is generally to assess and describe something, often with an eye to providing ongoing developmental information or information that can be used to compare one program with another. Evaluation, unlike experimentation or quality control, often has to establish its own standards as it proceeds.

Evaluation has problems associated with neither experimentation nor quality control. It doesn't have the advantage of routine that quality control has, and it doesn't have the advantage of control over question formulation and control over extraneous variables that experimentation has. Typically, evaluation is required to provide answers to questions that are poorly formulated (for research purposes), and it has to be done in situations where adequate controls cannot be instituted for ethical or practical reasons. These problems are usually compounded with others: relevant variables often aren't known in advance, allowable experimental designs are weak, the expected change is small at best, and even if the above odds are beat the decision-makers to whom the evaluation is addressed will use the information poorly if at all. As if that weren't enough, the results of an evaluation might threaten someone's job or project. In America, this threat is handled by the time-honored method of sabotaging the input information in near-invisible ways.

In spite of the problems, evaluation works. Decision-makers tend to develop both a sixth sense that judges credibility and a multiple-advisor approach that provides a chance for corroborative information. But the use of evaluative information is nowhere near its potential.

From a systems viewpoint, an evaluation scheme must evaluate itself along with other things. It would make sense to regard evaluation in terms of its end product: influencing decisions. While this wouldn't distinguish between evaluation and propagandizing, it would at least clear up the issue for some rethinking. It would remove the need to keep evaluation a poor cousin to experimentation.

Evaluation, then, comes somewhere between experimentation and quality control, somewhere between testing for the new and maintaining the old, somewhere between the purely theoretical and the purely practical. Its main problem is poor control over both question formulation and experimental design, both of which weaken its ability to detect what are probably already hard-to-detect changes. Its main function is to feed into a decision process intended to guide rational evolvement from the inside and to allow comparisons from the outside.

Models For Evaluation.

RATIONAL DECISION THEORY. Rational decision theory today is synonymous with statistical decision theory. Most of what is usually called statistics is a misuse of statistical decision theory: it typically involves rejecting a hypothesis that is irrelevant to the focus of concern (the null hypothesis) by a criterion that is irrelevant to either goals or reality in the particular situation (the 5% level). This misuse does not reflect the state of the art. In fact, the mathematical end of rational decision theory is well-formulated and essentially a solved problem.

The statistical formulation of the rational decision problem involves taking a measurement on a decision variable and comparing that to a criterion or cut-off point that is established to maximize profits or minimize losses given certain payoff contingencies and certain prior beliefs or experience. Once the decision variable, the expectations, and associated gains and losses are known, then the remainder of the problem is mechanical.

Decision variables differ in their adequacy to the decision problem at hand. If the decisions made on the basis of one decision variable cannot be improved upon by adding more information or more decision-variable measurements, that that decision variable is termed a "sufficient" statistic for that decision problem. In some kinds of decision

problems, for example, a simple statistic known as the likelihood ratio can be shown to be sufficient in exactly this sense.

Thus, statisticians have turned the rational decision process into a set of equations. All we have to do is supply the sufficient statistics, the adequate decision variables, to plug into the equations. The trivial part is done, all we have left is the hard part. We know what to do with the measurements, all we have to do is find out what to measure. The form is known, now we need to supply the content.

Finding sufficient statistics to use as decision variables is a problem of primary importance. Even finding close approximations would suffice. Factors that block us are, again, the complexity of the issues we are deciding and the limitations on our human ability to deal with complexity. We have to be very careful to cut nature at the joints, as the saying goes. The problem is complicated by the fact that the premature use of insufficient statistics can easily lead to a shift of perception in which the statistic replaces the original goal. The idea of mental capacity has been replaced by the empirical, atheoretical, culturally normalized measure called the IQ. The way it is being used today is a glaring example of this shift in perception: there is argument over racial differences in IQ. Though some good souls would reject the possibility, it seems to me there <u>are</u> racial differences in IQ, and it seems one would <u>expect</u> to find them. IQ is not, however, a sufficient statistic to decide anything about mental capacity. It is no more than a (sometimes) helpful indicator. This would be true even if there were agreement on how to measure it. Racial or cultural differences are an indication of the inadequacy of IQ as a measure to perform its role.

Our difficulty in finding adequate and non-intrusive decision variables in the Conceptual Project has led us to back away from the formal decision-theoretic approach to evaluation. Two rationalizations seem appropriate to justify this: first it was felt that the likelihood of our finding a good set of decision variables was low; and second it was felt that formal justifiability of the statistical decision-theoretic type contributes little to the actual use of information in decision-making in the field of education. In many cases it makes a negative contribution in that the aura of rational decision making is retained

while all kinds of violations of the statistical assumptions incorporated. The most common and most insidious is the selection of information late in the process--that technique could be used to show coins always land tails-up.

Our approach has been to take a coherent, systematic view of the decision process and its complexities. In doing so we have felt free to back up to a careful use of personal opinion instead of objective measurement. Humans can be good measuring instruments and in some situations can be more nearly adequate in their opinions than more objective measures can be. Humans are also notoriously susceptible to misperception and misrepresentation. Care must be exercised to arrange the observation so that defensiveness and vested interests do not, even subconsciously (a tactful concept!), influence the observation so as to bias it.

GOALS MODEL. Systems exist and programs operate to fulfill some needs, to meet some objectives, to satisfy some goals. The goals model evaluates the program by its accomplishment of the goals. The trouble with the goals model is that it is incomplete. First, there is seldom any adequate measure of how achievable a particular goal is. Some goals may be unachievable, hence all goals-model evaluations of programs to deal with those goals will show the programs to have failed. Some goals may be unachievable, others may even be mutually contradictory. In the absence of a theory of goal achievability, the only adequate measurement of a program's goal achievement is comparison with another <u>operating</u> program attempting to achieve the same goal.

In the second place, systems are multifunctional units and exist for other purposes than the primary goals. They hire people and utilize community resources, for example. In the goals model this is handled by the awkward inclusion of "hidden" or "private" goals as opposed to the public goals. Some of these other goals may directly affect the achievement of the public goals, and the actual allocation of resources may result in the greatest efficiency if not too heavily focussed on the public goals. The goals model does not handle this part of the problem at all.

ACCOUNTING MODEL. This model is based on an input-output view of

a program and emphasized the economic aspects or efficiency of the program. As with the goals model, there is seldom any basis for measuring absolute efficiency so it is most useful in comparing two parallel programs. The accounting model, like the goals model, is generally only useful to the extent that it provides an adequate documentation of the program.

SYSTEMS MODEL. The term "systems" is jargon for attempting to take a complete look at all the relevant things. The emphasis is on a "whole" of interrelated parts, a Gestalt, a total configuration. A systems model for evaluation includes both a goals model and an accounting model within its range of concerns, and may use statistical decision processes. It also includes consideration of the evaluation and its role in decision-making. The earmark of a systems approach is its concern with systematic coverage of the whole. In this sense, a systems model is the basic model on which evaluation of the Conceptual Project is based. It is an attempt to get beyond the limitations of the other models simply by not recognizing the boundaries imposed by them.

Model of Evaluation for the Conceptual Project Workshops.

For our purposes, evaluation is based on the following systems-model considerations. The first consideration is that the evaluation has two audiences: internal and external. The function of evaluation is to be a part of the decision process in both audiences by providing relevant and useful information. The internal decision process has to do with the development and improvement of the workshops. The external decision process has to do with funding and with outside comparisons of the project with other ostensibly similar projects.

The model for internal decisions is the rational evolution model: decisions are made to retain those features of the workshops that are adequate and to improve those features that are inadequate. A central problem is the press to develop the workshop design as fully as possible as rapidly as possible, which means that the usual rule of changing only one thing at a time has to be disregarded. The workshop format has been developed as a series of relatively independent modules. Working in a modular format has allowed us to sidestep many of the most difficult pro-

blems: individual modules are the pieces that are either retained or selected for improvement, and comparing them with each other gives an effective measure of success that is impossible otherwise. We don't have to find out if a particular module is working as well as it might--which we probably couldn't assess if we tried--but whether it is working as well as some other module in the context of the workshop. The oppressive and unanswerable question of whether or not the workshops succeed or fail, which leads directly to defensiveness, is replaced by the neutral question of deciding which module was most successful and which module could benefit most from further development.

To be specific, we have developed the workshop in terms of five process modules. These we have named by their essential function within the workshops, as Introduction, Exploration (input to participants), Synthesis (a lecture), Utilization (output from participants), and Wrap-up (summary and discussion). We have found that we had to add another module: pre-workshop training of local workshop leaders and aides. We have also found that it is convenient to consider some aspects of running the workshop as pseudo-modules, such as that dealing with technological gear, including TV, and audio-visual materials, that dealing with office-work such as transcribing, reproducing, making financial arrangements and the like, and that dealing with the transportation of the workshop materials and staff to the workshop site. Since each of these modules is relatively independent of the others (in the sense that the internal way in which the module is handled does not affect the others and is not affected by them), each module is able to be changed separately which allows many changes to be made at once without concern over the unanticipated consequences of the interaction of the changes.

The model for external decisions is somewhat differently conceived. It is assumed that the role of evaluation in external decision processes is both direct and indirect; the evaluation report itself may reach the people who make the decisions, but it also is traditionally routed through a body of middlemen. These middlemen serve in an advisory capacity to the decision makers, performing an interpretation of the evaluation and providing their own evaluation. To be effective at all, the evaluative

information must make it through the filtering that occurs in both the direct and the indirect routes. The essential variables become very clear in this view of the evaluation: the information must above all be credible, it must above all be understandable, and it must above all be useful. Beyond that, it must address itself to the full range of the considerations used in the decision process.

Our model of the external decision-making process requires that the evaluation be based on the following set of primary variables:

1) Credibility. An example of information that is high in credibility is information provided by an outside evaluator who is not invested in the ongoing project or in the outcome of the evaluation. Another is direct quotes from participants, rather than some interpreted and coded version of them.

2) Understandability. Direct answers to simple and clearly formulated questions are generally high in understandability. As an example, we ask participants to state their expectancies of the workshop before it starts and we ask them to evaluate the satisfaction of their stated expectancies after the workshop ends.

3) Usefulness. We try to limit our evaluative efforts to direct questions concerning the decisions to be made. For internal development purposes, this means asking for relative opinions about the modules, which ones were successful and which were not. For external purposes, this means the formulation of a module in terms of what is to be accomplished and then the consideration of several alternate ways of going about it. This focuses the problem on a choice between alternatives, which makes the external evaluation problem that much easier.

4) Scope or coverage. As much as possible we try to avoid closing the evaluation to certain kinds of information. Our forms include several open-ended questions for the purpose of avoiding the information loss that occurs if there is no room on the form for a certain type of information. For example, we ask participants to single out the most important negative feature and the most important positive feature of their workshop experience, without attempting to structure what is to be considered important.

Summary.

By way of summarizing the points that have been made in this presentation, our concern has been to reinstate evaluation as a form of feedback that is actually used in understanding a system or a project. Our overall goal is to understand complex issues with our limited human capacity to deal with complexity. We therefore use simplified models, even ones that may deal with unobservables. The only justification is that the technique of using models has been helpful to scientists in the past.

The rational decision model, though most commonly misused, is fully developed for our purposes, and is even a bit mechanical in its application. But it applies only after a certain level of development and formalization of the process has occurred, namely, after the adequate decision variables have been identified and validated. We have found that the adequate decision variables are not known at this point in time and that the way to find them isn't readily apparent. For this reason, we have backed off from the rational or statistical model. This will not affect the evaluation results much in terms of usefulness because the field is not particularly prepared to make its decisions on the results of evaluation based on the statistical information that would result.

The goals model, which evaluates a project in terms of whether or not it succeeded in meeting its stated objectives only, is an incomplete model in that it has little or no room for some indirect functions. The usual way around that limitation is to institute a separate category of "hidden" goals, which is an arbitrary and misleading division. The second problem is that the goals model is almost never based on a realistic assessment of the achievability of the goals themselves, and may be judged inappropriately on that grounds. A way around this problem is to avoid judging a program in isolation but to evaluate it in comparison with another existing program operating to meet the same objectives.

The accounting model, which assesses the relation between inputs and outputs, is essentially an efficiency model. It has the same problem that the goals model has in that there is no theoretical justification for assuming that the goals are even achievable in many cases, so that it can realistically only be used to measure relative efficiency by

contrasting one program with another that is already operating and is trying to meet the same objectives.

The systems model includes both the goals and accounting models as subconcerns, and also includes some evaluation of the evaluation effort as well. It is primarily concerned with the attempt at providing a complete description of the system that has evolved in the attempt to meet some stated objectives. It is more global than either of the preceding models and concentrates on the interaction of many factors.

The model used for evaluating the Conceptual Project workshops is above all a systems model. It is meant to feed into both internal and external decision processes about the project. Considering the kinds of use for which the information is intended has led to the identification of several primary variables to attend to. For internal evaluation and evolution, the variables have to do with the ability to retain adequate features and to improve inadequate features, the capacity for rapid evolutionary development, the capacity for flexibility, and the development in terms of relatively independent workshop modules. For external evaluation the chief variables are: credibility, understandability, usefulness, and the coverage or scope of the concerns dealt with.

This model for evaluation is in direct response to the unique problems associated with evaluation, not only in the Conceptual Project but also in the field of education in general. These problems are: the results of the practical nature of the intent, namely the poor control over question formulation and the inability to use strong designs; the nature of the issues being evaluated, namely that the expected changes are typically small and hard to detect; and the nature of the traditional decision process in the field, namely that statistical information is seldom weighted heavily because it is so commonly misused or even sabotaged. Instituting the use of verbatim transcriptions of answers to simple but direct open-ended questions has met some of the needs for credibility, usefulness, and understandability; developing the workshops in modules with an evolutionary structure discourages the kind of defensiveness that elicits cover-up activity in evaluation. Contracting for outside evaluation with a specific mandate to consider various alternatives

to observed processes and techniques again addresses itself to credibility and the removal of defensiveness and also removes the need to make strictly arbitrary judgments of success or failure.

Anxiety, Intelligence, and Behavior Variables
As Predictors of Learning
In Disturbed Adolescents

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The number of educational programs for emotionally disturbed children has increased considerably during the past decade. The expansion has been stimulated by a rapid shift in the way the problem is viewed by many psychologists and educators. The trend has been away from a medical or disease orientation, and toward a behavior disorder model which views deviant behavior as being subject to principles of learning. Federal legislation has contributed to the change by providing financial support for educational research and services; and for training programs for the preparation of teachers. Several states have also enacted legislation which makes services for these children mandatory. Even though several different approaches to educating these children are being used, apparently with success, very little is known about which approaches are most appropriate with regard to children who behave in particular ways; or in fact whether there is an important relationship between overt behavior and learning. But analysis of learning characteristics of maladjusted children seems an important activity likely to contribute significant information relative to program development for these students.

We have seen in the past a strong tendency to restrict treatment of disturbed children to intervention directly in the affective realm of their lives. It has even been accepted as "sound doctrine" that they should not be subjected to learning in the cognitive sense until they regain better control of their emotions. But more recently some professionals have been insisting that treatment must include cognitive as well as affective intervention (Hewett, 1964; Hobbs, 1966). A small but growing body of research seems to support this claim (Glavin and Quay, 1969; Clarizio, 1969).

Even the casual observer can see wide variations in behavior patterns among children classified as emotionally disturbed. Some children characteristically withdraw from social interaction and avoid situations which would place them in contact with other children or with adults. Others tend to be hyperactive and aggressive; while still others appear

immature and childlike in comparison with peers of the same age. The work of Quay, Peterson, and their associates has shown that behavior-problem children can be reliably classified on the basis of observable behavior patterns (Becker et al., 1959; Peterson, 1961; Peterson et al., 1961). This research indicates that the so-called personality problem child tends to withdraw from interactions with others and to be anxious, self-conscious, and depressed; while the conduct problem child, on the other hand, typically displays acting-out, disruptive, and often delinquent behavior.

There is some evidence that fear and anxiety are among the primary characteristics of personality problem children, while conduct problem children are not bothered by this persistent anxiety (Eysenck, 1957). If this is true, the relationship between learning and anxiety has important implications for the educational achievement of these children. It would be expected, for example, that the personality problem child, working under greater stress, will be less able to meet the requirements of school-related work which is often heavily weighted in higher-level cognitive skills, particularly at the level of work reached in the secondary schools. This suggests that the teacher's ability to discriminate between these dominant behavior patterns will enable her to better understand and plan for the particular learning requirements and needs of the student. The work of Bloom and associates (1956) with the taxonomy of educational objectives provides examples of the use of information relative to cognition in instruction.

The purpose of this study was to determine the degree of relationship between level of learning skill of behavior disordered students, and the subject variables of anxiety, intelligence, and pattern of overt behavior. The subjects were selected from adolescent boys who were hospitalized in the youth treatment centers at two of the state psychiatric hospitals of Missouri. The hospitals provide diagnostic and long-term treatment services for emotionally disturbed children and youth from a large part of eastern and central Missouri. The subjects selected were boys within the age range of thirteen to seventeen years. Each was enrolled in the educational program in one of the treatment centers. Subjects were selected from a hospital population because it constituted

a pool of previously identified behavior disordered adolescents, identified independently of the conduct of this study. The degree to which the sample is representative of all behavior disordered children is not certain. However, a large proportion of the subjects were committed to the institutions by judicial action, indicating that patterns of delinquent behavior, rather than medical or psychiatric diagnoses, provided the reason for most of the hospital commitments. Boys only were included in the sample because the predominance of males in the youth center populations made it impractical to control for variance due to the sex variable in any other way.

The state hospitals of Missouri function both as treatment centers for emotionally disturbed children and as residence centers for youth who may more appropriately be called delinquent. This is evident in the fact that approximately eighty to ninety percent of commitments of youth throughout the state are initiated by judicial action. The remaining commitments are voluntary, in most cases having been initiated by parents or by physicians. The average duration of hospitalization for children and adolescents throughout the state is decreasing, and presently is about one year (Conway, 1972). Only a small proportion, about one in ten, of adolescent patients in all the state hospitals are black. Approximately fifteen percent of youth discharged from the hospitals are later readmitted to the same or to another mental health institution of the state. The boys sampled as subjects for this study conformed generally to the pattern typical of the state as a whole. Boys in the youth centers were selected as subjects only if they had been enrolled in the educational program of the center for at least one month. The average length of residence was ninety-five days. Boys who were considered mentally retarded, as determined by use of a standard test of intelligence, were not selected. The total sample size was forty-three students.

The study attempted to answer these specific questions:

1. What is the relationship between level of learning skill and anxiety level in behavior disordered adolescents?

2. What is the relationship between level of learning skill and intelligence in behavior disordered adolescents?

3. What is the relationship between level of learning skill and the personality problem variable in behavior disordered adolescents?

4. Can knowledge of a student's anxiety level used in conjunction with an intelligence score and a teacher rating of overt behavior provide useful information relative to his level of learning skill?

The learning variable used in the study was measured with the Missouri Test of Learning Skills (TenBrink, Trimble, and Conway, 1971), an experimental test developed at the University of Missouri. It was constructed on the basis of Gagné's (1970) model of learning which postulates eight discrete types of learning which are hierarchical in terms of the order of cognitive ability required for each. The test measures the level of skill in several of the types of learning described by Gagné. A total score was derived for this study as an index of the level at which the subject typically functions in classroom learning situations. Quay's Behavior Problem Checklist (1967) was used to order the subjects on the personality problem behavior variable. Measures of intelligence and general anxiety were also obtained. These scores were analyzed by use of correlational and multiple regression techniques.

The following conclusions can be stated regarding the basic questions posed in the study.

1. The higher the level of general anxiety of a behavior disordered adolescent student, the lower will be the level of his skill in a hierarchy of learning abilities. This means, for example, that the student who tends to maintain a high level of anxiety is less likely to be skilled in rule application and other high level learning tasks than is a non-anxious student of comparable general ability.

2. A behavior disordered adolescent student who is highly intelligent will tend to me more skilled in high level learning tasks, such as concept formation and rule application, than will a comparable student who is less intelligent.

3. The more the overt behavior pattern of a student tends to be regressive, withdrawn, and retiring; the lower will be the probability of his being skilled in high-level learning tasks such as concept learning and transfer. An inverse relationship exists between learning skill level and this personality problem pattern of withdrawn behavior.

4. Due to the relationship which anxiety, intelligence, and the personality problem pattern of behavior have with learning skill, knowledge of student levels on these variables can be used singly or in combination to make inferences about the level of learning skill of a student. Use of the three variables as predictors of learning provided greater predictive efficiency than the use of only one or two. But to exclude anxiety from the predictive system, and to use only the intelligence and personality problem scores, was nearly as efficient as the use of all scores. This is due to the high degree of common variance shared in the anxiety and behavior scores, making either of these used in combination with intelligence almost as informative as both used together.

5. The current interest and research in regard to behavioral intervention techniques for the education and treatment of behavior disordered children should be encouraged and continued.

It was concluded that for behavior disordered adolescent males who are patients in state psychiatric hospitals of Missouri, a definite pattern of relationships exists among learning skill, intelligence, overt behavior, and anxiety. The results of this study were limited in scope, and further research is recommended to clarify certain relationships and to broaden the base for generalization.

1. This study should be replicated with varied subject populations in order to establish the generality of the results on a broader basis. Hospitalized youth were the source of data for this investigation, but the same learning and behavior variables are also present in youth of many other backgrounds and are of concern to professionals in many other settings.

2. The relationship of overt behavior to other cognitive and affective characteristics of students should be examined in greater detail. The emerging evidence that mental processes can be manipulated through the application of "behavioral engineering" techniques opens up a potentially valuable avenue for approaching some of the difficult mental health and educational problems being faced currently

in these professions.

3. The Missouri Test of Learning Skills should be further developed as a potentially valuable tool for educational diagnosis and planning. Included in this development should be a refinement of administrative procedures, increased use of the instrument on varied populations to broaden the base of normative data, and additional studies relating to validity of the tests.

4. The data obtained in this investigation should be analyzed in other ways to discover relationships among variables which were not discovered in this study. An example would be to identify discrete subject groups on the basis of extreme scores on the behavior rating, and use discriminant analysis techniques to determine what variables can discriminate between subject groups.

5. The importance of learning skill level as a useful reference point for instruction should be further examined. If the assumption is valid that an educational program should help to prepare a student for the complexities of contemporary living, then considerable attention should be given to see that students have opportunity to learn problem solving and other high level thinking and learning skills. The process of exploring ramifications of this variable for teachers has barely begun.

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THE EFFECTS OF A TOKEN SYSTEM

ON OUT-OF-SEAT BEHAVIOR

by

Joann Harris, Jasper W. Harris, and R. Vance Hall

Abstract

The purpose of this study was to decrease the occurrences of out-of-seat behavior by a 7 year old boy. This study was conducted in the inner city area of Kansas City, Missouri at an open concept elementary school. Praise and a token reinforcement system with back-ups were used to decrease out-of-seat behavior.

Introduction:

One of the most talked about subjects in the inner city is the poor education available for black youth. Often in the home, education is not viewed with much importance since mere survival is such a problem. However, learning should begin in the home, but often very little is done before the child enters school. The purpose and importance of an education should have been implied before a child enters kindergarden. For, by the time the child enters school, he is usually very active and curious about his new environment. If he views education as important, then this energy can be channeled into constructive avenues. that will be conducive to learning.

Problems are many in the inner city schools. Many variables, such as the home environment, the neighborhood, and the size of the family influence the behavior of the child. These and many other variables have to be taken into consideration by the teacher when she programs learning situations in the classroom.

A hyperactive child, who has the potential to learn but who emits inappropriate behaviors, has to be programmed and scheduled so that learning can take place. This sometimes seems impossible when the class sizes are so large. Yet, very little can be accomplished when classrooms are frequently disrupted because of inappropriate behavior. Classrooms can be turned into utter turmoil, regardless

of the preparation made by the teacher, if she does not have control of each student. If the teacher loses control of one student, then often she has lost control of the entire class. Therefore, this writer has implemented a simple procedure that demonstrates that inappropriate classroom behavior can be decreased by a classroom teacher. The inappropriate behavior worked with here is out-of-seat behavior.

Population and Setting:

Steven, a seven year old , black, third-grade student, interrupted the class many times during the day by getting out of his seat. He was from a family of twelve children where he was the fifth youngest in the family. Both parents were in the home and both were employed. The parents were asked to come to school for a conference concerning Steven's behavior, but only the mother was able to attend. The inappropriate behavior that Steven emitted was explained to her. She stated that Steven was a very "nervous" child at home; " He is always getting into things". The behavior was explained to her again. The procedure that we were going to use to modify his behavior was explained and she agreed to give us whatever support she could. We also received valuable information about Steven's likes and dislikes for we felt this would be of great value to us in developing ways to modify his behavior.

This study was conducted in an inner city elementary school in the heart of Kansas City, Missouri. This open concept school, where the team approach to teaching was used, housed approximately 900 students. The grade-levels ranged from kindergarden through the seventh-grade. The classrooms were divided by folding doors which were kept open during class periods. Each grade-level consisted of four classes, called pods, and every four pods were referred to as an area. Innovative teaching aids such as overhead-projectors, movie projectors, film strip machines and etc. were used to motivate the students to learn. Some of the classes such as writing, mathematics and story hour were taught by one teacher for the whole area, after which each teacher did follow-up work in her pod.

This pod consisted of thirty-five students whose desk were arranged in a semi-circle facing the front of the room. Each student had his own desk where his books and materials were kept.

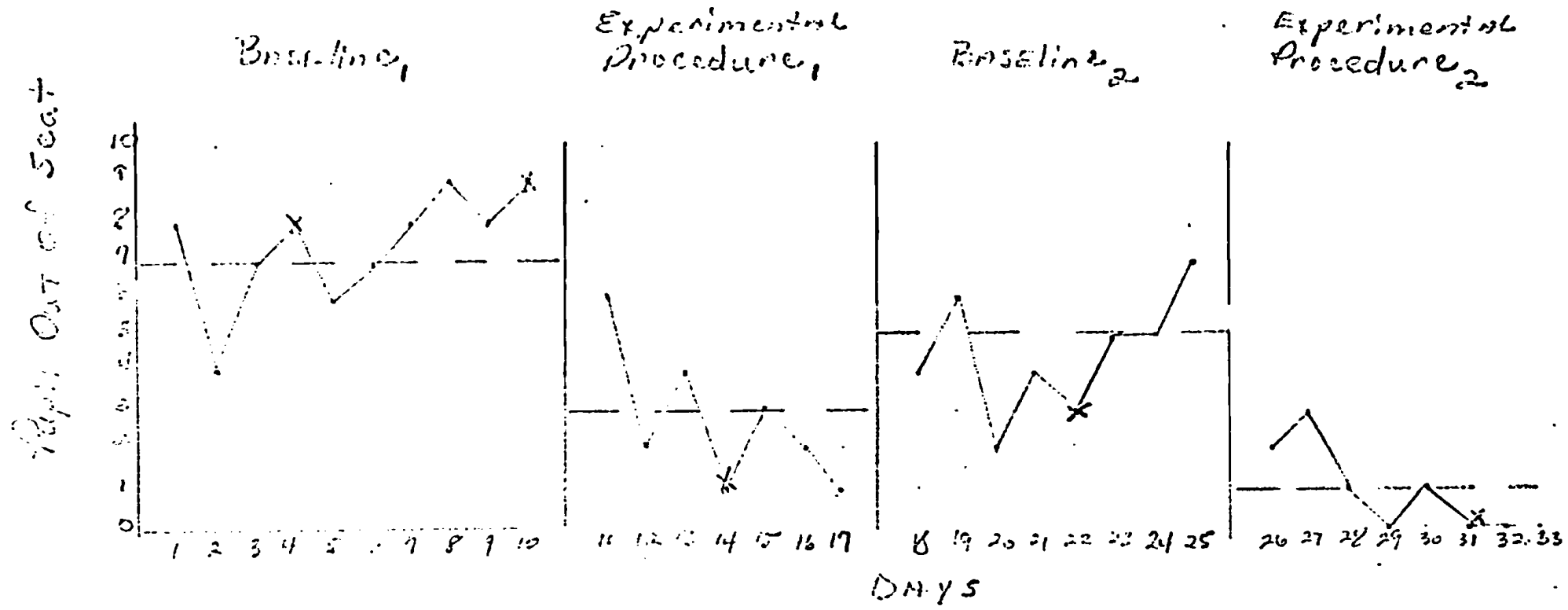
Personnel:

Each pod had a teacher and the assistance of a teacher aide who spent two hours assisting in the room. Mrs. Allen, Steven's teacher was thirty-eight years old and had been teaching for eight years in the inner city area.

Procedure and Results:

Before baseline data were recorded, two conferences

STEVEN.



Reliability ×

were held by the researcher, the teacher and the teacher aide to discuss and define the behavior to be measured. It was decided that whenever Steven's buttocks left the seat of the chair, then this behavior would be considered out-of-seat.

Baseline$_1$

Daily baseline data were recorded for out-of-seat behavior by the teacher. Marks on paper were made when the teacher noticed that Steven did not have his buttocks on the chair. This data were recorded for 10 days. The number of occurrences of out-of-seat behavior ranged from 4 to 9 with a mean of 7. Reliability checks were made twice during this phase by the researcher and was found to be 100%.

Since Steven's inappropriate behavior was increasing, as shown during Baseline$_1$, we decided to implement Experimental Procedure$_1$. Instructions were given Steven before this procedure was put into effect. The teacher had a conference with Steven on Friday afternoon of the tenth day and told him that it was very important for him to stay in his chair, inorder to complete his work. She told him that he would find some pieces of paper in his pencil box, on top of his desk, when he came to school on Monday. She told him that if she noticed that his buttocks were not touching the chair, that she would take one of the pieces of paper from his pencil box each time. She also told him

that at the end of the day he could exchange the paper, left in his pencil box, for marbles. He was told that this procedure would start the following Monday.

Experimental Procedure$_1$

On Monday when Steven arrived at his desk, the pieces of paper had been placed in his pencil box. Data were recorded, by the teacher, whenever Steven did not have his buttocks touching the seat of the chair. Whenever she did notice that his buttocks were touching the chair, she would praise him for this behavior. His out-of-seat behavior started to decrease during this phase. The number of occurrences of out-of-seat behavior ranged from 1 to 6 with a mean of 3. Reliability was taken once and was found to be 100%. To see if this phase altered the behavior, we decided to return to Baseline$_2$.

Baseline$_2$

At this time the teacher told Steven that she did not have any more marbles to give him and that she thought he had learned to stay in his seat during class. The next day when Steven came to school, he checked his pencil box for the pieces of paper but did not find any. After all the students had assembled and had started to work, Steven started getting out of his seat. The teacher again kept account of the out-of-seat behavior. The number occurrences of out-of-seat behavior ranged from 4 to 7 with a mean of 5.

Reliability was taken and was found to be 100%. As shown on the graph, the behavior had started to ascend.

Experimental Procedure$_2$

On the 25th day, the teacher told Steven that she would bring some marbles to school on Monday. She reviewed the rules with him so he would know what was expected of him on Monday. During this phase, his inappropriate behavior decreased. The number of occurrences of out-of-seat behavior ranged from 0 to 3 with a mean of 1. Reliability was taken and found to be 100%.

Discussion:

The results of this study indicated that praise, a token system and back-ups were successful in decreasing the number of out-of-seat occurrences emitted by Steven. This procedure is a simple one that could be implemented by any elementary teacher with very little response cost. It would be interesting to determine with future research whether praise alone would be a powerful enough reinforcer to maintain low or no occurrences of out-of-seat behavior.

ACADEMIC SURVIVAL SKILL TRAINING FOR LOW ACHIEVING CHILDREN[1]

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University of Oregon

In several studies, behavioral researchers have demonstrated that children's inappropriate classroom behavior can be decreased and replaced with incompatible response classes presumed to be more effective for learning in an academic setting. Encouraging results have been obtained with a variety of different techniques manipulating variables such as teacher attention and praise (Becker, Madsen, Arnold, & Thomas, 1967; Hall, Lund, & Jackson, 1968; Madsen, Becker, & Thomas, 1968), token economies (Hewett, Taylor, & Artuso, 1969; Hops, 1971; Kuypers, Becker, & O'Leary, 1968; Walker, Mattson, & Buckley, 1971), self-reinforcement (Bolstad & Johnson, 1971), and individual (Cobb, Ray, & Patterson, 1971; Patterson, Shaw & Ebner, 1969), and group (Lovitt, Guppy, & Blattner, 1969; McAllister, Stachowaik, Baer, & Condermon, 1969; Packard, 1970; Schmidt & Ulrich, 1969) contingencies. However, relatively little has been done by way of showing that increases in such response classes directly result in increased academic performance, per se. The present paper is a report on an experiment to demonstrate a relationship between classroom behavior and achievement.

Some researchers have begun to define relationships between precise categories of classroom behavior and academic achievement by using the correlational method. They have found a strong relationship between behavioral measures and academic achievement on standardized tests (Lahaderne, 1968; Meyers, Atwell, & Orpet, 1968). In a series of studies of first and fourth-grade children, Cobb (1969, 1970, 1972) found a consistent relationship between such behavioral classes as attending to teacher, following teacher

instructions, volunteering to answer academic questions, and the students' performance on achievement tests. Those behavioral categories found to be related to achievement were presumed to be academic survival skills that were necessary, but not sufficient, for successful academic functioning. They were not academic behaviors, per se, but conceptualized as the first components in a sequence of correct academic responding; e.g., a child cannot read correctly or at a high rate unless he begins looking at his book. Since the results of these studies consistently pinpointed, on a correlational level, a relationship between behavior and achievement, the next step was to determine if a causal relationship between academic survival behaviors and achievement existed.

The present study was the first in a series designed to investigate the functional relationship between levels of academic survival skills and academic reading achievement of low-functioning children in regular classrooms. Packard (1970), Patterson, Cobb, & Ray (1972), and Walker, Mattson, & Buckley (1971) demonstrated clearly that changes in appropriate behavior can be obtained. It was hypothesized, therefore, that intervention procedures based upon these researchers' work would significantly increase the survival skill level of experimental versus control children.

Cobb, Ray, & Patterson (1971) and Walker & Buckley (1972) indicated that probabilities of behavioral changes maintaining after intervention can be increased if social agents have been involved in the intervention procedures. In the present study, teachers were trained in their regular classroom setting to use effective social behaviors such as contingent approval, ignoring of inappropriate behaviors, and vicarious reinforce-

ment. These new teacher behaviors, coupled with the pairing of teacher social praise with nonsocial reinforcement, as employed effectively by Walker, Fiegenbaum, & Hops (1971), were hypothesized to maintain the gains in academic survival behaviors during the follow-up period.

In addition to replicating previous findings that lower socioeconomic status (SES) first graders' scholastic performance is below that of higher SES children, Cobb (1970) found that survival skill levels differed for the groups in the predicted direction, i.e., lower SES children exhibited smaller percentages of the behaviors in the classroom setting than was true for higher SES children. The finding was expected because the lower class, in comparison with the upper class, home environment is less likely to provide training in academic survival skills (Zunich, 1962). It was suggested that this lack of training was a major reason for poor academic performance rather than some other factors, e.g., intellectual ability. Minde, Lewin, Weiss, Lavigeur, Douglas, and Sykes (1971) demonstrated that hyperactive children, handicapped by their persistence in exhibiting inappropriate classroom behaviors, did perform significantly poorer academically than other students of the same intellectual ability. Using these and other findings as a rationale, the authors' third hypothesis was formulated. Pupils receiving survival skill training would make significantly greater gains in reading achievement than control students.

Method

Subjects

In a school district of approximately 21,000 students, the subjects were 18 first-grade children from three regular classrooms whose teachers

agreed to participate in the program. After observational and reading achievement data were collected in each classroom, the six children who had low rates of academic survival skills combined with low scores on the standardized reading tests, relative to their classmates, were identified. One classroom was designated as control and the other two classrooms as experimental.

Achievement Tests

The Gates-MacGinitie Primary A was administered prior to, immediately following, and one month after intervention had been completed as part of an overall reading achievement battery. A mean of each child's standard scores on the two subtests, Vocabulary and Comprehension, was calculated for each administration.

Observations

Observations of classroom behavior using a sequential coding system (Cobb & Hops, 1971) were made during the same week in which achievement testing occurred. Children were observed during reading periods for five consecutive days. All pupils were observed sequentially; the observer coded the behavior of each student for two continuous eight-second intervals before going on to the next. Once the entire group had been sampled, the observer began the sequence again so that each pupil was coded several times.

Cobb (1970) reported the survival skills, Attending (AT), Volunteering (VO), and Look Around (LO), as moderate correlates of first grade reading achievement. For the current study, AT was redefined as two new independent categories: Attending (AT) and Work (WK). For each student,

the frequency of LO was subtracted from the summed frequencies of AT, VO, and WK. The obtained figure was then divided by the total of all behaviors. The proportion represented the percentage of time the child engaged in survival behaviors during observations.

Observer reliability was calculated by dividing the total number of agreements by the total number of recorded behaviors. Observers were trained until they reached a reliability of 85%, or greater, with an experienced observer on three occasions. Four full-time and two part-time observers were used in the study. Reliability data was collected systematically between various pairs of observers. The range was 85% to 99% with a mean of 94% based upon 46 paired observations.

Intervention

All of the intervention procedures took place in the regular classroom. The group survival skill approach was based on the work of Packard (1970), Patterson, Cobb, & Ray (1972), and Walker, Mattson, & Buckley (1971). To train the teachers, the experimenters used modeling, cueing, daily feedback, and social praise, all of which were faded out as the children's behavior became more appropriate. Readings were assigned which coincided with various aspects of the program. Components of the child training procedures taught to and employed by the teachers were group nonsocial reinforcement, individual and group social reinforcers, vicarious reinforcement, shaping procedures, close monitoring, pairing of social and nonsocial reinforcers, and the fading out of nonsocial reinforcers as the children progressed. The period of intervention was 20 school days.

Teacher Training

First session. Training of the teacher began after collection of the baseline data. The experimenter had the first meeting with the teacher after school in her classroom where all of the training took place. The concept of academic survival skills and its supporting research were presented. Each survival behavior was defined and modeled by the experimenter, and the teacher was asked to define the behaviors as they applied to her particular classroom. Relevant material on the rationale for observing behavior and for collecting baseline data from two programmed texts, Living with Children by Patterson & Gullion (1968) and Modifying Classroom Behavior by Buckley & Walker (1970), were assigned. The reading assignments were chosen so that the next task in the training sequence was likely to be understood and completed satisfactorily.

Second session. At the second session, the teacher presented survival skill definitions that were applicable to her classroom. Clarification was provided when the experimenter anticipated that children might not understand the definitions. The teacher's comprehension of the previous reading assignment was tested verbally, and she was then asked to collect baseline data on the entire reading group for three days. A clock and light mechanism was explained and demonstrated using role-playing and modeling techniques. The teacher was taught to operate the mechanism by activating a switch at the end of an extension cord connected in series to a clock and green light. The clock provided the teacher, as well as the class, with an account of the number of minutes the entire group was engaged in appropriate behavior; the light provided a signal that the clock was operating.

Intervention procedures included programming of social and nonsocial reinforcers; so the teacher was given a second reading assignment to familiarize her with the concept of reinforcement. In addition, she was asked to prepare a list of potential nonsocial group reinforcers to be used following each intervention session. The assignments were to be completed for the next training meeting to be held after the three days of baseline data had been collected.

Third session. The teacher was tested to determine whether or not she understood the previous reading assignment on reinforcement. The list of potential reinforcers, which included free time, extra recess, and academic games, was checked. The experimenter demonstrated, and the teacher practiced, the way to use contingent social praise and vicarious reinforcement and to ignore inappropriate behaviors.

The mean percentage of time all students were simultaneously exhibiting academic survival behavior for the three baseline days was calculated from the teacher's data. This mean figure became the criterion for reinforcement on the first day of intervention.

Consultation during intervention. Once the program had been introduced to the class, the experimenter observed the teacher's behavior as she operated the clock and light device and delivered social praise to each child as well as to the entire group. After each period, the experimenter spent some time with the teacher going over data collected on her behavior such as her rate of using vicarious or group reinforcement; her daily improvement as reflected in the data was praised. Monitoring and providing feedback to the teacher by the experi-

menter was rapidly faded so that during the last two weeks of the 20 school day program, the experimenter was in school only once. The total amount of time spent by an experimenter was determined to be approximately 12 hours.

Child Training

After three days of baseline data had been collected by the teacher, the program was explained to the children. They were told of the classroom behaviors that had been defined by the teacher and experimenter. It was pointed out that they could learn better by performing these behaviors and a program was being introduced to help them accomplish this goal. In one class cartoons depicting the survival behaviors were made and in the other class the list of behaviors was placed on colored construction paper; both of these were prominently displayed during the intervention phase.

The experimenter helped the teacher explain the operation of the clock and light device to the class. He role-played appropriate and inappropriate behaviors while the teacher operated the mechanism.

The children, and especially the low-functioning children, were asked to contribute to the list of group reinforcers previously made up by the teacher. They were told one of their choice would become available each time they reached the criterion.

Just prior to the beginning of each intervention period, a colored strip of paper was placed at the criterion point on the clock. For those children lacking an adequate time concept, the paper simplified understanding of the daily requirement.

During the first day of intervention, the experimenter occasionally approached a child who was exhibiting inappropriate behaviors to help teach the relationship between behavior and the running of the clock and light.

This teaching seemed necessary as many children recited what the survival behaviors were and stated that certain behaviors kept the clock and light device from operating, but they did not relate their behaviors to the operation of the device. Once the relationship had been demonstrated a few times, further reminders were unnecessary.

Each day the criterion for reinforcement was determined by the number of minutes accumulated on the previous day. When the children reached the criterion for a day, the same amount of time was required in the following day. If the children surpassed the required amount of time, then the new time established was used the following day. They were never asked to perform better than they had previously demonstrated they could do. If they failed to meet the criterion, it remained the same; if they failed on two consecutive days, it was dropped back to the previous level.

During the first week, the children were awarded their group reinforcer immediately after each session providing they had met the criterion set for that day. Later on, the criterion had to be met for more and more sessions before a reinforcer was available. The final requirement was five successfully completed days. On the last occasion, however, the reinforcement was of greater magnitude, e.g., a field trip. This reinforcer ended the intervention phase, and it was anticipated that the teacher training in social praise and management techniques would maintain the children's behaviors.

Results

The first hypothesis related to the effectiveness of the intervention procedures in increasing survival skill behaviors. Figure 1 shows that

the experimental children increased their level of survival skills from a mean proportion at baseline of .49 to .61 immediately following intervention, an increase of 24%, while the controls remained at approximately the same level during the same period, showing a gain of only 3%.

Of more practical importance, however, was the second hypothesis regarding the maintenance of survival skills 4-6 weeks after the post-intervention assessments. Figure 1 demonstrates that the 12 experimental children maintained and, in fact, increased the gains made during intervention. In contrast, the control children showed a 16% decrease from the post-intervention level, dropping from a mean proportion of .64 to .54.

Statistical analysis of the survival skill data across the baseline, post-intervention, and follow-up phases was carried out using a two way analysis of variance with repeated measures on one factor (Winer, 1962, p. 302). The results shown in Table 1 indicated that significant column ($p < .01$) and interaction ($p < .01$) effects were obtained. These findings supported the hypotheses that the intervention procedures would be effective in increasing the level of survival behaviors for the experimental group and that the gains would be maintained during the follow-up phase.

The direct causal relationship between the changes in levels of survival skills and changes in achievement scores was the third hypothesis to be tested. While the survival skill data demonstrated that behavior could be altered and maintained, the major question was the effect of such changes on reading achievement. As shown in Figure 2, the main reading achievement scores for the 12 experimental children increased from 37.96 at baseline to 48.63 immediately after intervention, an increase of 28%.

A further increase of 9% over the post-intervention level resulted in a mean score of 52.83 at follow-up. The control group, in contrast, gained 11% from baseline to post-intervention, and only 4% more during the last phase of the study. The experimental children, beginning at a lower level than the controls, surpassed them on the post measure and continued to show greater gains during follow-up.

The changes in reading achievement were found to be statistically significant as presented in Table 2; column and interaction effects were significant at the .005 and .05 levels respectively. Both groups gained over the course of the study; however, the substantial gains made by the children in the experimental classes were significantly greater than the controls.

The hypothesis that survival skill increases would result in increases in reading achievement received major support from the present findings. The experimental children made greater gains in survival skills <u>and</u> in reading achievement than was true for the control students. What was of particular import was the fact that the behavioral changes between <u>each</u> assessment period were reflected in concomitant achievement changes for both groups. Where the greatest gains were made in survival behaviors, the greatest gains were also made in achievement scores as well, e.g., the experimentals made the greatest behavioral increase, 24%, and the greatest achievement increases, 28%, during the intervention phase. Likewise, the smallest gains in survival behaviors were reflected in small achievement gains, e.g., the <u>decrease</u> of 16% in survival behaviors for the controls during the follow-up period was reflected in the smallest achievement gain, only 4%. It would appear that changes in survival skills led to changes

in achievement.

Discussion

The results of the present study have clearly shown that the intervention procedures were effective in increasing and maintaining survival skill behaviors and that such gains are related to gains in reading achievement. These findings have practical applications for the classroom and raise a number of questions for further research.

The continued increase in survival skill level for the experimentals during the follow-up period had not been predicted, but provided additional evidence of the procedure's power to effect positive change. The decrease for the controls during the same period provided a sharp contrast effect and suggests that the low-functioning child may reduce his level of survival skill behavior unless procedures are introduced to maintain them.

Many studies have demonstrated successful intervention in individual school cases. Such a group technique as was used in the present study can be used with the educationally handicapped child, as well as his classmates, and without a seemingly extra amount of effort on the teacher's part. The group procedures may be a viable means for helping most children and thus keep many handicapped children in regular, rather than special, classrooms.

The children in this study were only a small sample of first-grade students who generally would be referred for special services. Indeed, further research is required to determine what percent of educationally handicapped children can be aided by the group technique developed in the present study. At this writing, one of the experimental children, whose response to the intervention procedure was the poorest of the entire group,

is receiving special attention for high rates of inappropriate behavior in the second grade. This child has been described as a typical "acting-out, hyperactive" student who constantly disrupts both classroom and playground activity. It may be that such group procedures can be effective for a large percentage of children with a variety of handicaps, but certain children may require more individually tailored programs (Cobb, Ray, & Patterson, 1971).

The findings raise major research questions regarding the entire process by which the children's improvement is related to their increases in survival skill levels. Observations of the teachers in the present study suggest that this set of procedures provides a vehicle by which teachers can observe what each student is doing academically as well as behaviorally. It is not a contradiction to state that the group procedure had the effect of forcing the teacher to be consciously aware of children in the class individually and to assess the relevance of her teaching to each child's current level of functioning. It may be that group survival skill training is primarily a setting in which individualized instruction can flourish.

One other major question has to do with the quantity of change. Does a rise of 15 percentage points from the 30 percent level produce the same quantity of achievement change as a rise of 15 points does from the 80 percent level? Previous data by Cobb (1970) suggests that an optimal level of survival skill functioning may be established for specific academic settings, but that very limited data is currently available to make statements about the minute aspects of the survival skill and achievement relationship. Further research will be required to provide answers to these and other speculations.

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FOOTNOTES

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TABLE 1

Analysis of Variance with Repeated Measures for Proportion of Survival Skill Behaviors (AT + WK + VO - LO) at Baseline, Post-Intervention and Follow-Up for Experimental and Control Students

Source	df	MS	F
Between Subjects			
Groups (A)	1	.008	< 1
Error Between	16	.034	
Within Subjects			
Phases (B)	2	.040	6.41*
A X B	2	.055	8.85**
Error Within	32	.006	

* $p < .01$
** $p < .005$

TABLE 2

Analysis of Variance with Repeated Measures for Mean Achievement on the Gates-MacGinitie Primary A at Baseline, Post-Intervention and Follow-Up for Experimental and Control Students

Source	df	MS	F
Between Subjects			
Groups (A)	1	31.148	< 1
Error Between	16	40.617	
Within Subjects			
Phases (B)	2	727.255	41.90**
A X B	2	62.016	3.57*
Error Within	32	17.358	

* $p < .05$
** $p < .005$

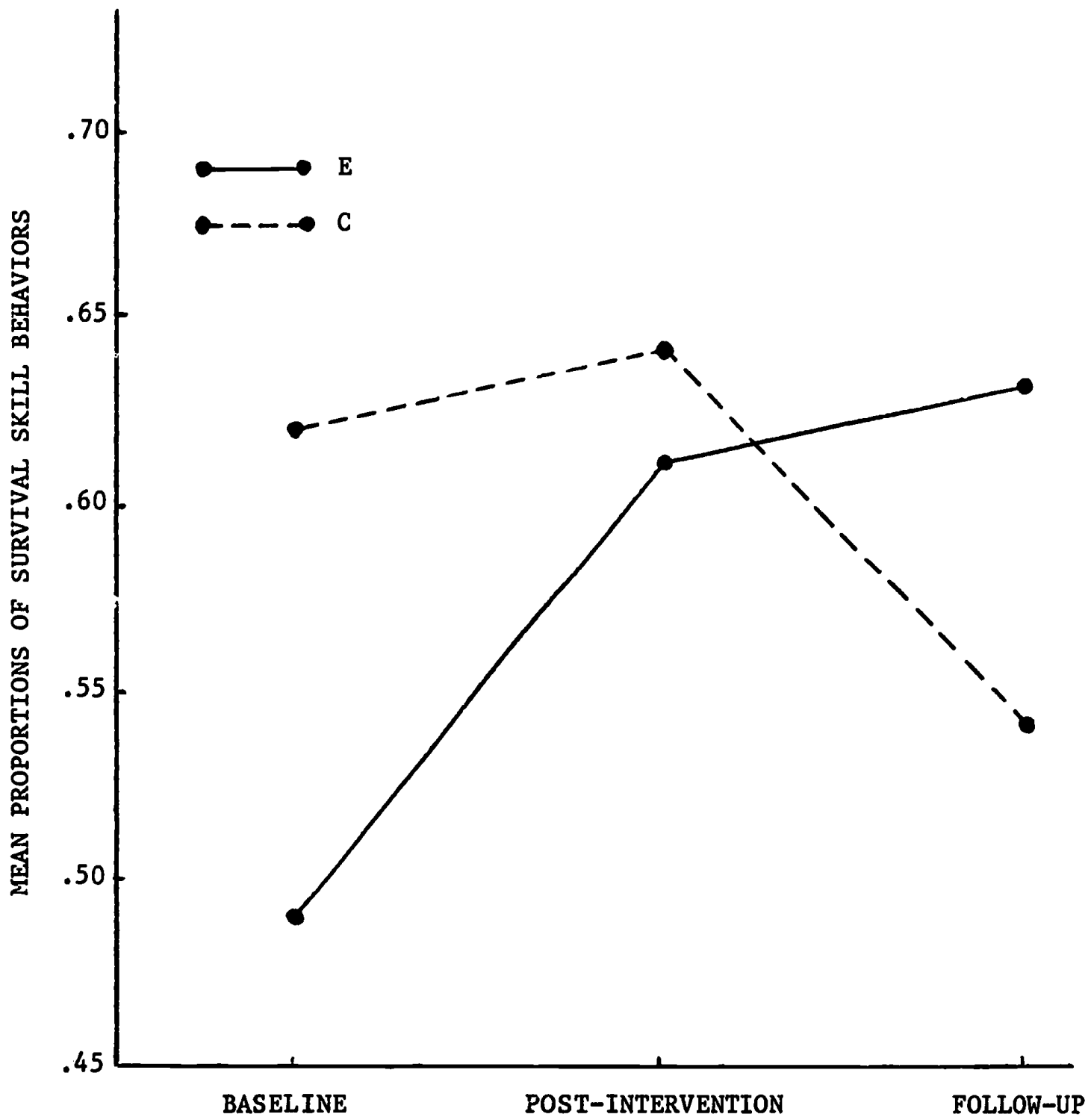

Fig. 1. Mean proportions of survival skills (AT + WK + VO - LO) at baseline, post-intervention, and follow-up for experimental and control students.

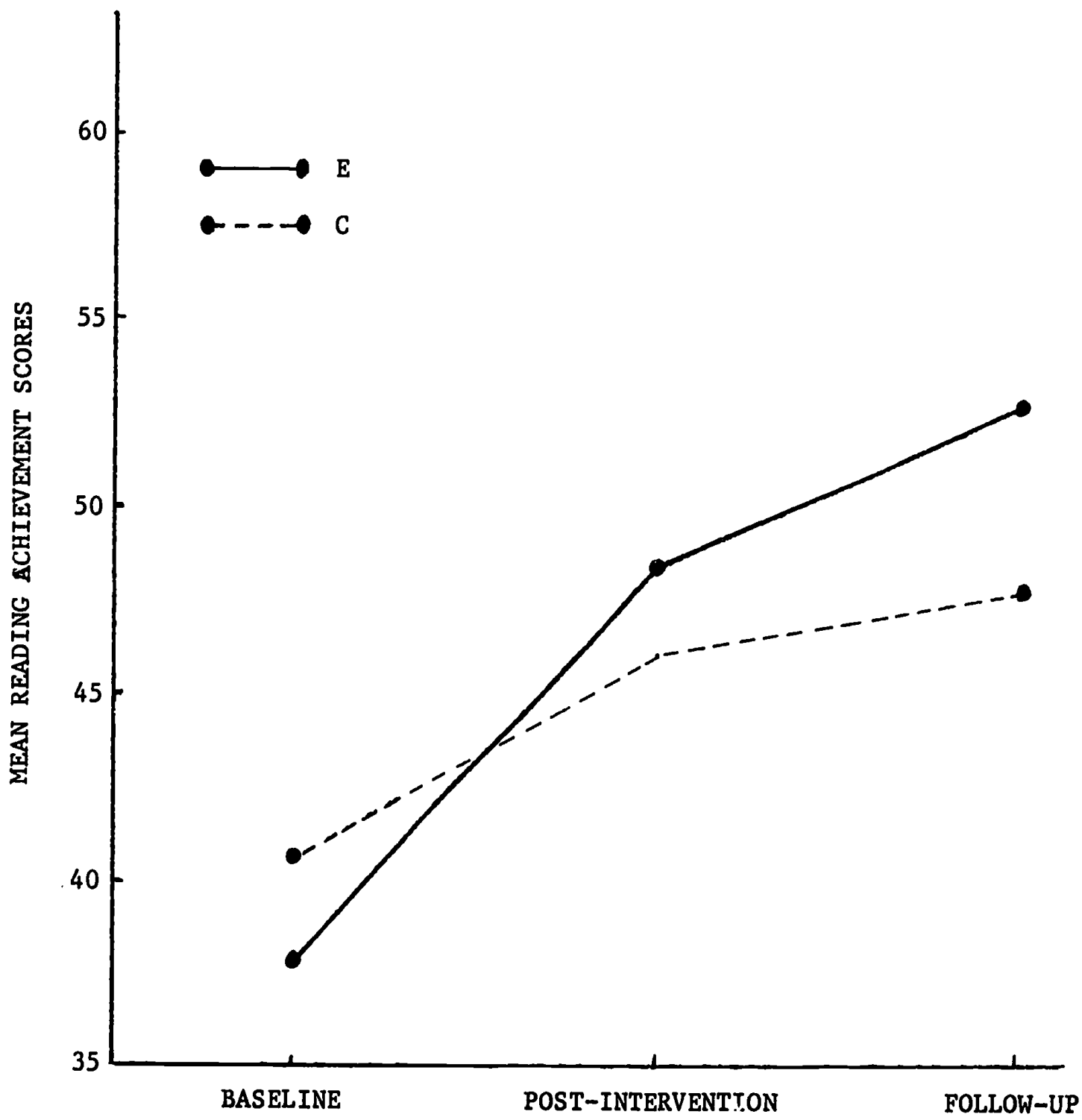

Fig. 2. Mean achievement scores on the Gates-MacGinitie Primary A at baseline, post-intervention, and follow-up for experimental and control students.