

THE UNIVERSITY OF MANITOBA

BEHAVIORAL CASEWORK WITH CONDUCT DISORDERED  
CHILDREN IN A REGULAR  
KINDERGARTEN CLASSROOM

BY

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## Abstract

In recent years attention has focussed on children who are non compliant, disruptive and aggressive in the school system. The purpose of this practicum was to develop skill in using one approach--behavioral casework--to help keep these conduct disordered children in a regular classroom. The work was done in the kindergarten, with three individual children, and one group using behavior modification techniques in combination with social work skills. Subjects were observed systematically throughout the intervention and changes in target behaviors were recorded. The treatment phase consisted primarily of contingency management--rewarding incompatible behavior and using time out. Other procedures used as individual needs arose are reported. Problem behaviors were reduced but the lack of a firm research design limits the extent to which the change can be attributed to the intervention. The practicum itself did develop skill in incorporating behavioral techniques into social work practice. In addition, speech was developed in two electively mute children, using the same methods.

## Acknowledgments

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## INTRODUCTION

### Aim

In the fifteen years since I obtained a Bachelor of Social Work there have been many additions to the body of knowledge upon which social work rests. It is the purpose of this practicum to explore in depth one of those additions--social learning theory and behavior modification. In particular, the practicum will provide an opportunity to work with conduct disordered children in a regular kindergarten, using behavioral casework (Herbert & O'Driscoll, 1977) as the primary mode of intervention. This approach acknowledges the importance of traditional Social work values and skills, but incorporates into that base theory and methodology from behavior modification.

### Practical and Educational Benefits of Investigating the Problem

#### Benefits to the children

Recent emphasis on early identification of problems has focused the attention of teachers and parents as well as remedial resource people on the child whose behavior is "different". There has been a thrust to remove the more extreme of these children from the regular classroom to a setting which will "meet their needs." In a backlash against this approach, there is now a move to keep children

in the mainstream as much as possible. I am in complete accord with this philosophy. There are many benefits inherent in a program whose sole thrust is to keep the child in a normal environment. He does not suffer the pangs of removal to a special class and the accompanying stigma. He learns what appropriate behaviors are required in the setting and how to perform them.

The high drop out rate of children in core area schools is also a concern. It has been found (Feldhusen, Thurston, & Benning, 1972) that aggressive children do significantly less well academically than do peers who exhibit socially approved behaviors. Academic difficulty has been identified (Powell & Anderson, 1978) as a factor in "dropping out" of school. It seems that one useful approach to "dropping out" is behavioral.

Another factor in early leaving may be the child's tendency to view education as punishment which is relatively easily avoided by truancy.

Perhaps, if a child learns early to perform behaviors which are acceptable and requisite in the school, he will not be so likely to regard school as punishment. Hopefully he will remain longer. (This of course assumes the presence of appropriate remedial instruction and a curriculum which is relevant to the interests and needs of the population of the school.)

A fifth benefit to the child may be that the teachers

will come to view his behavior as inappropriate learning rather than as an inherent "craziness". This may encourage the teachers to employ their special teaching skills to help the child acquire new behavior, rather than to "get him out of their hair" as quickly as possible so they can get on with teaching other, less troublesome children. If teachers can come to expect appropriate behavior from the child, this will be helpful to him.

Of course, the special attention the child in a behavioral program receives will to some extent set him apart. Hopefully, workers will be sensitive to this and minimize it. It may also be necessary to intervene directly to help the child get along better with his peers.

Briefly, (if intervention "works") the child will experience greater success within the regular school setting, more positive regard from his teachers and more acceptance from his peers.

Walker, Johnson and Hops (1972) comment that in their experience behavior problems referred to family agencies by the school are the most likely to result in early termination. This is not surprising in view of the findings of their group, and of Wahler (1969), that children who are behavior problems at school frequently behave within normal limits at home. It is also thought that behaviors which cannot be tolerated in the classroom may be acceptable in the home...the middle class values the school

system espouses are not functional for the marginal family and may not be within the five year old repertoire, or are frowned upon at home. Within this context, involvement of the total family in traditional therapy seems to be inappropriate. Of course the family must be aware that the child is having difficulty negotiating the system and must consent to treatment, but within the behavioral mode its members are not expected to invest a great deal of time and energy in analysing their methods of operation. Given the already strained resources of the marginal family, this would seem a welcome approach. It also may free any fears they have of having produced an inherently "bad" child.

#### Benefits to the teachers

If teachers can view behavior as learned they may feel more comfortable with the child who exhibits it. Freedom from the fear of working with "crazies" is in itself helpful. The greatest benefit to the teachers, however, would be that they would not be responsible at the outset for planning and implementing the program within an already busy schedule. Since the worker would be investigating the use of direct intervention, she would be responsible for the observation, assessment and treatment of the conduct disordered children. The teachers would have a demonstration of how behavior modification succeeds and fails and would be able to reach their own conclusions. It was also expected that there would be

some vicarious learning. Hopefully, they would also be the co-creators and beneficiaries of a less disruptive class of children

#### Benefits to the writer

There are so many moving pieces in applied work that it is difficult to definitively state that behavior modification has caused a change for the better in conduct disordered children. Certainly the literature indicates that this may be the case, but there are reservations. The greatest practical reason for undertaking this practicum was to gain a first hand, "gut" feeling for the approach and its strengths and weaknesses. This would include an opportunity to see if it fit with my personal style of working, belief about the rights of the individual and commitment to changing a system which, by its nature, suppresses the disadvantaged. Equally important, it was expected to provide an opportunity to develop the skills that are essential to sensitive, rigorous, ethical and effective behavioral case work. It would sharpen and expand more traditional social work skills in relationship building and interviewing both adults and children. Finally, it would also broaden my experience of working within a multidisciplinary system.

## CHAPTER I: LITERATURE REVIEW

### Conceptual Framework Surrounding the Client Problem

The behavioral view: Behavior is learned

Behavior modification does not have a global theoretical base which undertakes to explain the totality of human behavior (Kanfer & Phillips, 1970). Rather, it explains human activity on the basis of theories derived from laboratory investigations with both animal and human subjects. This research has contributed to social learning theory (Bandura, 1969; Kanfer & Phillips; Mahoney, 1974). The basic stance is that most behavior is learned and that its performance is influenced by contemporary thoughts, feelings and environmental events rather than by historically laid down intrapsychic conflicts of an unconscious nature. It is obvious that the emphasis on observable and contemporary behaviors which has traditionally been the hallmark of the behaviorist (Skinner, 1973) has broadened to include recognition of the important role private thoughts and feelings play in the acquisition and maintenance of behavior (Bandura, 1969; Mahoney, 1974). Similarly, there is an emerging interest in historical influences upon behavior which differs from the psychodynamic interest. There is no attempt to "work through" past experiences,

but rather an effort is made (a) to show that those experiences have taught unacceptable ways of acting, or (b) to ascertain the limitations that genetic inheritance or trauma may place on the individual's ability to learn new ways of behaving.

The distinction between a psychodynamic conceptualization of personality and the behaviorist social learning view is epitomized by the following statements:

Most non behavioral therapies... conceive of personality as consisting of relatively stable and related motives, characteristics and dynamics that underlie and are responsible for a person's overt actions...to simply observe and tally behavior in life situations is inadequate in that the essence of the personality is more influential than may be directly observed (M. Goldfried, 1977, p.5). (Italics mine).

Behavior, then is seen by social learning advocates as resulting from

reciprocal interaction of external circumstances with a host of personal determinants including genetic inheritance, acquired competency, reflective thought and a high level of self initiative (Bandura, 1974, p.867).

Within this concept there is no room for a "medical" or "disease" explanation of behavior unless there is a clear organic or hereditary cause. A problem is seen as "a way of responding to certain current situations which is unacceptable to the client or other people" (Jehu, 1974, p.2). It follows that the way of responding can usually be altered to become acceptable without leaving the client

with an underlying drive restlessly seeking expression through symptom substitution.

#### Definition of "conduct disorder"

Given the foregoing conceptualization of human behavior in general, perhaps it is important to turn specifically to a consideration of the acquisition and maintenance of conduct disordered behavior in children. Herbert (1978) is quick to point out that the concept of a conduct disorder is imprecise; the category overinclusive and untidy. He then offers the following definition. Conduct disorders are

strategies of adjustment which the child has learned to his own disadvantage (and to the disadvantage of others) in the attempt to cope with the demands of life. These maladaptive strategies are by products of the stresses and strains of growth and development for an imperfect organism functioning in an imperfect world. The development of inappropriate strategies (or the failure to acquire appropriate strategies) for coping with life-tasks may be due to faulty training and example or other environmental deficiencies. They may be a result of neurological deficits or other inherited or acquired impairments (p.18).

In functional terms conduct is disordered when it has unfavorable consequences particularly with regard to its frequency, duration, intensity and developmental appropriateness. The behavior also deviates widely from accepted social standards.

Even if the behavior is an entirely appropriate reaction to a highly pathological environment (home or school) it is still problematic because of the disabling consequences it has for the child in the broader social context. The labels which are frequently attached to a conduct disordered child include: "antisocial", "oppositional", "disruptive", "aggressive", "hyperactive", "attention-seeking", "boisterous". Obviously conduct disordered children are not a homogeneous group.

#### Acquisition of conduct disordered behavior

It is argued here that the acquisition of conduct disordered behavior is largely related to the failure of the child to learn socially acceptable behavior within the family and school during the formative years.

Since serious non-compliance to social and moral norms is a characteristic of the conduct disordered child, it is helpful to understand the development of social and moral behavior.

Social learning theorists view the family as particularly significant in the child's moral and social development, deciding which social stimuli he is exposed to and what he is taught. It decides which behaviors to reward and which to punish. Positive experiences give shape and substance to the prosocial patterns of behavior with which they are linked and the more often the responses are repeated and reinforced, the more durable they become.

The failure of the family to provide adequate and consistent socialization experiences is thought to make a child vulnerable to the development of conduct disorders.

Typically the picture the family presents is one of discord and quarrelling, paucity of affection, inconsistent, ineffective or harsh discipline, often accompanied by divorce or separation or periods when children are placed in care (Farrington & West, 1971).

The learning of behavior is based on differential reinforcement--approved behavior is encouraged and praised (rewarded) while undesirable behavior is punished. The punishment is thought to produce a state of anxiety which becomes associated with both the external and internal stimuli the child perceives at the time. Herbert (1978) suggests that anxiety recurs with the next presentation of these stimuli and because it is a powerful response it inhibits other responses. A more usual explanation is that the anxiety evoking behavior is discontinued or avoided in order to reduce the unpleasant anxiety reactions. There is agreement that

principles which derive from the study of anxiety conditioning on the one hand, and instrumental learning, on the other, are used to explain guilt and the braking mechanism, resistance to temptation.... Responses of fear and anxiety are elicited automatically in the youngster when he contemplates transgressing the rules. These emotions persist throughout his life if the early conditioning processes have been effective and if the ongoing reinforcement contingencies with respect

to moral conduct remain essentially unaltered through his formative years. This form of behavioral control has its locus in the external environment and does not involve any internalization but is a vital stage on the way to this goal (Herbert, 1978, p.27).

To the child at this stage, a rule is a rule is a rule--transgression always is expected to produce punishment. This is the earliest stage of moral development described by Piaget (1956) as "blind obedience" and by Kohlberg (1969) as "preconventional thinking".

The second step involves the cognitively maturing child's perception of rules as no longer arbitrary, but as rational and objective. This involves discriminating subtle differences in meaning and intent of actions as well as providing reasons for the rules. This is Piaget's second stage of "interpretation of the rules" and Kohlberg's "conventional thinking".

Finally, rules and controls over behavior are internalized--a conscience is formed. Behaviorists would say that actions are internalized to the extent that their maintenance is independent of external outcomes, and the reinforcements are internally mediated. This is parallel to Piaget's "interpretation of the act" stage and Kohlberg's "post conventional thinking", in which one conceptualizes universally applicable social contracts and moral principles which should be followed apart from the power of those who hold them or break them. The essential difference between the social learning theory and

Piaget's explanation is in Piaget's emphasis on development of morality as a maturational progression, while learning theorists have demonstrated that the moral judgments a child makes are less age specific than Piaget has suggested and can be developed and modified by exposure to social models. (Bandura & McDonald, 1967). Kohlberg's attention to the reasoning behind the decision rather than the decision itself is in harmony with the attention learning theorists are now paying to internal processes in behavior.

There is agreement (Wright, 1971) that the following conditions are conducive to the development of moral standards:

1. strong ties of affection between parents and children
2. firm moral demands made by parents upon their children
3. the consistent use of sanctions
4. punishment that is psychological rather than physical
5. the intensive use of reasoning and explanations.

Apparently there is a subtle interaction during the socialization process between the child's cognitive structuring of the situation, his ability to represent to himself punishment contingencies and the extent of emotional arousal which is associated with his cognitions. The child who, due to past learning experiences, innate inability and/or traumatic injury is deficient in any of these capacities may well be at risk of becoming conduct disordered.

The focus of this study was limited to kindergarten children who were at the first stage of development--where the consistent application of reward and punishment is thought to be crucial in setting the stage for further socialization.

In sum, I suggest that the children whose behavior can be subsumed under the conduct disorder umbrella include non-compliant, aggressive, hyperactive, and disruptive youngsters. The behaviors of course may occur in smaller amounts in most children, but these children are much more spectacular in their actions. The basic assumption is that these behaviors result from the failure, for various reasons, of the child to learn and perform behaviors which are in tune with the norms of his society.

If conduct disordered behavior, like other behavior, is learned, it is essential to be aware of some of the genetic and biological characteristics which influence a child's learning abilities. The interested reader is referred to Eysenck (1964) for a discussion of the variable conditionability of people, and to Rolls (1975) and Blakemore (1977) for a discussion of the role of the brain in mediating rewards and punishment. Herbert's (1978) chapter on the biological basis of antisocial behavior provides an excellent summation of the relevant information. Suffice to say that the child's unique inheritance may modify a parent's interactions with him as well as limiting his ability to respond to the stimuli they pro-

vide. The parent-child relationship is a two way process and there is little doubt that some children are more difficult than others to socialize. The reciprocal interactions of the parent and child are in a constant state of adjustment as each reinforces or punishes the other. Rewardingness and punitiveness may not be qualities inherent in the parent but may be called out by a particular child and his behavior. These qualities are vital factors in the learning situations encountered by the child, and could be extended, at least theoretically, beyond the family to a consideration of the child's interactions with society at large including the school system.

Proceeding then from a conceptualization of behavior as being caused and maintained by external conditions and internal thoughts and feelings, as well as being bounded by physical characteristics and of a conduct disorder as a behavior which has been learned in the same way that other behaviors have been learned, but which is maladaptive for the individual and/or others, consideration will now be given to the approach to be used in this practicum in treating conduct disordered children.

#### Characteristics of A Behavioral Intervention: An Overview

It is believed that the effective thrust of treatment is to identify an observable behavior, systematically alter the conditions which are maintaining it (relying on techniques based on learning theory and experimental research),

and finally assess the effectiveness of the intervention. This is the process of behavior analysis (Sulzer-Azaroff & Mayer, 1977). The hallmarks of the treatment are:

1. It is performance-based--it depends largely on phenomena which are observable and measurable rather than inferred or interpreted. (There are certainly treatments which do rely on reports of internal feelings. While I recognize the important role these may play in maintaining behavior or prohibiting the acquisition of new behavior, they are not the primary focus of the treatment at the outset. They will be dealt with when and if they arise. Even then such broad terms as "mad" will be operationalized to become "hits his brother", "swears at the teacher", "clenches his fist".

This arises from the conviction that a "significant proportion of the child's problem behaviors are controlled by events--antecedent and consequent--that can be observed, measured and modified" (Herbert, 1978, p.52). There is direct intervention for the problem behavior--not for its presumed underlying intrapsychic causes.

2. It uses principles of behavior (rules describing the relation between what an individual does and certain conditions) which are incorporated into behavior change procedures that are designed to effectively modify behavior by either increasing it, decreasing it, teaching a new behavior, maintaining a newly acquired behavior, extending it into a new setting or restricting it to an appropriate

setting.

3. It is analytic--using repeated, direct measurement of the target behavior and its antecedents and consequences to evaluate the effectiveness of the intervention. In their discussion of this point Sulzer-Azaroff and Mayer (1977) add that behavior analysis, through its careful choice of research design also demonstrates functional cause-effect relationships between intervention and behavior change. While I agree that it has the potential to demonstrate cause-effect relationships, many studies have serious flaws which confound such conclusions. In practice it may not be possible to achieve the controls necessary to clearly demonstrate cause and effect. More will be said about this in the methodology section of the paper.
4. It is concerned with the improvement of socially important behaviors. It must clearly describe the gains the client may expect both now and in the future and show how any changes that accompany the behavior change will not interfere with the client or the community's short and long range goals (Sulzer-Azaroff & Mayer, 1977).
5. It is focused on the here and now rather than on the history of the child (although, as we have seen, history is not neglected altogether).

Treatment begins with a rigorous assessment of the problematic behavior. Guidelines for the analysis phase are provided by numerous authors--Bersoff and Greiger,

1971; Gelfand and Hartman, 1975; Kanfer and Phillips, 1970; Sulzer-Azaroff and Mayer, 1977. Herbert's model (Appendix I) is particularly relevant because of its practicality in an applied setting, and its consideration of social relationships and the social-cultural-physical environment, any or all of which may be influencing the problem.

Jehu (1974) comments that

the first consideration has to be whether a direct attempt to modify the behavior is the best social work strategy. It may be more appropriate to modify the environment rather than the client's reaction to it. (p.3)

This would be a crucial factor in deciding whether to work with a child.

Data from the assessment is used to formulate a treatment plan focusing on altering the stimuli which elicit the behavior, the reinforcements which maintain it or a combination of the two. The experimental literature demonstrating the effectiveness of a behavioral approach is overwhelming. However the move into clinical use of behavioral procedures is more complicated because of the number of variables which may not be controllable. Nevertheless, some successes are evidenced as will be noted later. Treatments may be divided into three categories. Those which seek to alter the antecedent conditions (stimuli) include: systematic desensitization, discrimination training, cueing, flooding, modelling and aversion.

Methods which are directed at altering the consequences of behavior focus not only on the nature of the reward offered, but also on the temporal relationship between the response and its reinforcement. These procedures may be used to strengthen behaviors which are present but only rarely performed or to teach new behaviors. A useful discussion of principles of reinforcement may be found in Whaley and Malott (1971).

The most straightforward of these methods is to reinforce the desired behavior consistently and immediately with a valued reward. This is positive reinforcement. This will, all other things being equal, encourage the repetition of the desired behavior. The reward may be tangible in the form of food, toys or privileges; or symbolic in the form of praise, approval or added status.

Negative reinforcement, which is frequently confused with punishment, may also be used. In this case the removal of a negative stimulus results in a greater likelihood of the behavior occurring in the future. For example, if taking off a tight shoe stops my foot from hurting, I am more likely to take the shoe off the next time my foot hurts.

One of the most frequently used reinforcement techniques has been to strengthen responses incompatible with the target behavior by consistently rewarding the incompatible behavior. Many school workers with conduct disordered children have rewarded attending behavior, which is

incompatible with disruption, hyperactivity and aggression (Blanchard & Johnson, 1973; Kent & O'Leary, 1976; Patterson, 1974; Patterson, Cobb and Ray, 1971; Ray, Shaw and Cobb, 1972; Walker et al., 1972).

A fourth reinforcement technique is shaping--in which successive approximations to the desired behavior are rewarded. This is frequently used when the desired behavior is not in the child's repertoire.

If one wishes to decrease or inhibit behaviors, rather than increase or strengthen them, the worker may choose not to reward the obnoxious behavior (extinction). When the reward for the action arises from other people in the situation, it may be necessary to remove the child from all reinforcement for a brief period of time (time out).

The literature on the use of response-cost (in which a penalty is paid for failure to perform appropriately) in regular school settings is sparse and usually involves a whole class losing privileges (Harris & Sherman, 1973; Wolf, Hanley, King, Lachowicz & Giles, 1970). However it is common practise in institutional settings and in some group homes (Fixsen, Phillips & Wolf, 1973). The majority of conduct problems involve behaviors which need to be reduced or eliminated and other actions which need to be increased. Therefore differential reinforcement of other behavior, ignoring obnoxious (but not dangerous) activities, and time out, may be used simultaneously.

No use of more dramatic and controversial aversive

controls such as shock or deprivation of food or materials is reported in the literature on regular classrooms.

In sum, the treatment of aggressive, hyperactive, oppositional or disruptive children rests squarely upon the concept that most behavior is controlled by environmental conditions as well as by internal thoughts, feelings and emotions. Changing the behavior therefore, involves changing the conditions which maintain it. This emphasis is not new to social work, what is added is the importance of systematic assessment of observable phenomena, direct and repeated measurement of the behavior in question and the events that elicit and maintain it, and systematic manipulation of those controlling events. Finally, the efficacy of treatment is assessed according to set criteria. The intervention directly attacks the problem behavior rather than its supposed underlying causes and usually takes place in the setting in which the problem occurs, rather than the therapist's office. There is also an emerging concern with attempting to ensure that new behaviors learned in treatment will be long lasting and will transfer to other, appropriate situations.

This background will allow us to consider now some of the work that has contributed to the present state of knowledge about the problem and the interventions which attempt to ameliorate it.

Present State of Knowledge Regarding  
Conduct Disordered Children

Importance of the problem

My interest in this area began with casual observation. While working with foster children it seemed that the majority of teenage children who were in serious conflict with society's norms had histories not only of family disruption, but also of "behavior problems" in school and that these problems had been manifest almost from day one of school entry. Usually, the children were boys. Several years later, I was working as a volunteer in an elementary public school which had a high standard of teaching and a population of generally above average, well motivated children. I was struck by the enormous sense of helplessness shown by the teachers who were confronted by non-conforming, hyperactive children. It seemed these children were quickly identified, referred to the Guidance Clinic, and in some cases streamed into classes for exceptional children. If, as rarely happened, the child was returned to a regular class some months or years later, he appeared to encounter great difficulty maintaining the gains he had made in special classes. These observations gave rise to several questions:

1. Is there a group of children who by virtue of their excessive antisocial behaviors, are more "at risk" in the school system?
2. Is there an effective way to keep these "difficult"

children in the educational mainstream?

3. If this is a problem for teachers of bright, advantaged children, is it also evident in the core area schools which often serve multi-problem families?

4. Is a behavioral approach effective in dealing with conduct disordered children in a core area elementary school?

While the current epidemic of adolescent suicide and murder has focused media attention on the quiet, introverted or "neurotic" child, there is a body of literature suggesting that the child who is aggressive, oppositional, hyperactive and generally disobedient to those who are charged with the responsibility of socializing him, is also "at risk" in society.

Robins, in 1966, published a longitudinal study of 524 children seen in a child guidance clinic in the U.S. and re-examined 30 years later. Frequent antisocial behavior in childhood was a superior predictor of poor adult outcome than any other factor. O'Neal and Robins (1971) found that the group with aggressive antisocial behavior (group II) contributed more heavily to the psychotic diagnostic category than any other group (16%) and 50% came eventually to juvenile court. "Those who were seen as runaways, incorrigible and fighters had the lowest rate of adult psychiatric health" (O'Neal & Robins, 1971, p.203). The authors argue that certain kinds of childhood behavior problems are associated with certain kinds of psychiatric diseases in

later life. Further, the control group, picked because it had no striking school difficulty, presented no sociopathic personalities, conversion reactions or chronic brain syndrome in later life. They speculate that school record may be predictive of adult psychiatric health. In addition to the question of whether conduct disorders are predictive of adult mental health, Herbert cites several studies which consistently identify non-compliant behavior as a significant factor in several forms of child psychopathology, and argues that it has been shown that extreme disobedience is of prime importance (Herbert, 1978, p.13).

Despite Robins' evidence, there are some who have found childhood problems to be ephemeral and who question whether intervention is necessary or effective. Levitt's much quoted evaluation (1963) of psychotherapy with children argues that the referred but untreated children showed rates of improvement equal to children treated in psychotherapy. This confirms the results of an earlier evaluation by the same author (1959). (There is, however, one alternative explanation--not that the problems are transitional, but that treatment is not more effective than no treatment.) Allensmith and Goethals (1962) have summarized other data supporting the position that treatment may be an unnecessary luxury.

Zax, Cowan, Rapoport, Beech and Laird (1967) in a six year study, followed children who had been

evaluated in grade one as being "incipiently or manifestly" maladjusted and labelled Red Tag Children. The control group consisted of the other children.

They found conclusive support for their hypothesis that

children identified very early in their school career as having at least moderate emotional disorders or the potential for them will display poorer functioning in a variety of spheres if left untreated over time (p.372).

Unfortunately, the report does not identify or select for analysis the components of "emotional disturbance". It is conceivable that children at the excessive avoidance end of the spectrum may have been unduly represented and that findings would have differed had there been more excessive-approach children.

Feldhusen et al., (1972) in a five year study compared a group of third, sixth and ninth graders who "consistently displayed aggressive behavior" with a control group who consistently displayed "socially approved behavior". The focus was on the long range academic implications of persistently aggressive or socially approved classroom behavior, with intelligence controlled by analysis of covariance. It was found that the groups varied significantly--the more aggressive children being lower in English, Science, Math and Social Studies.

It does not seem likely that there will be agreement

about the predictive validity of early childhood pathology until studies which have identical dependent variables and research methods are conducted on a large scale. In the meantime it seems there is some evidence for the position that children who manifest serious behavior problems in kindergarten may make heavy weather of their remaining school career and be early leavers. It also appears that conduct disordered children come quickly to the attention of teachers and child guidance counsellors.

Woody (cited in O'Leary, 1972) found that when classroom teachers referred children to special classes, the children had the most common following characteristics: poor social relations, poor reading skills, poor concentration and "hyperactivity". These are often earmarks of the child Herbert calls "conduct-disordered".

Behavioral classroom intervention  
with conduct disordered children

### History

Levitt (1963) found that "the improvement rate with therapy is lowest for delinquency and antisocial acting out" (p.49). Given this apparent counter-indication for traditional casework or psychotherapy, it is encouraging to review the literature which indicates that a behavior modification approach has been effective in altering classroom behavior.

Forness and MacMillan (1976) comment that concern

with the connection between the child and his learning environment came to the foreground in the 1960's. Much of the early work was done with exceptional children... autistic, retarded, delinquent. Patterson, Jones, Whittier and Wright (1965) focussed attention on a hyperactive child in school and from that time studies attempting to establish effective means of altering disruptive behavior proliferated.

Much of this work has been done in schools in low and low-middle class areas (Becker, Madsen, Arnold & Thomas, 1967; Clark & Walberg, 1969; Cobb, Ray, Patterson, 1971; McMillan, 1973; Thomas, Nielsen, Kuypers & Becker, 1968).

The current reports which focus on problems of generalization and maintenance of behavior change, (Patterson, 1974; Kent & O'Leary, 1976; Walker et al., 1972; Stokes & Baer, 1977) and the effects of behavior programs on self concept (Parker, 1974) are a far cry from the early work in changing the behaviors of children in school.

While the literature does report the application of behavioral methods to entire classes of children in special settings (e.g. Doubros and Daniels (1966)), the majority of work in regular settings has focused on changing the behavior of one or a few children only (Ascare & Axelrod, 1973; Cobb et al., 1972; Darsch & Thorpe, 1977; Greenwood, Hops & Walker, 1977; O'Leary, Kaufman, Kass & Drabman, 1970; Patterson & Brodsky, 1966; Thomas et al., 1968). This is not surprising--hopefully only a few

children in any one class are markedly conduct disordered. To identify the behavior of all members of a class as conduct disordered, might be a case of overkill!

The basic premise of a behavioral intercession is that conditions in the social environment to a large extent explain the acquisition and maintenance of a problem behavior. These may be antecedent conditions (discriminative or eliciting stimuli), consequences (rewards or punishments) or more often a combination of the two.

Altering stimuli. There are few studies which directly deal with the alteration of stimuli in the classroom, although some authors (Cobb, et al., 1972; Winkler & Winnett, 1972) comment on the need for restructuring the total educational system or at least seriously questioning its goals and directions (a stance with which I am in sympathy). Patterson (1966) found it necessary to desensitize Karl's anxiety about separation from his mother before his other inappropriate school behaviors could be changed.

While it seems imperative that the therapist be cognizant of the stimuli to which the child is exposed, and be unwilling to begin a treatment program to "adjust" children to noxious stimuli, this stance has been explicit in the literature, rather than the focus of attention. Perhaps this is a future direction which merits more

explicit study.

### Rewarding behavior

The majority of the studies to be reviewed here have been directed at altering the reward system to which the children are exposed.

Individual contingencies. Many of the studies do not precisely say whether a unique criterion level for the reinforcement of each individual child was established (e.g. Walker, Hops and Fiegenbaum, 1976). Often the reader is left to make his own assumption--presumably a behavioral intervention, by definition includes this. Following from that it may be reasonable to suggest that most programs have as their starting point individual rewards based on individual criteria. (More complete descriptive information, such as Becker et al., provide would be helpful in clarifying the question.) The expectations for each child are unique and he alone is rewarded--the class has no stake in his performance. Although the description is not precise, I assume Kent and O'Leary's (1976) study is of this nature. McLaughlin and Malaby (1976) used an individual contingency as one phase of an experiment in self control. A discussion of the types of rewards used is found on page 39.

Group contingencies. Litow and Pumroy (1975) reviewed group reward systems and divided them into three categories

based on the contingency system used--dependent, independent and interdependent group oriented contingency systems. The dependent system is established when "the same response contingencies are in effect for all group members but are applied to the performance of one or more selected members" (p.342). An independent system exists when the "same response contingencies are simultaneously in effect for all group members but are applied to performance on an individual basis" (p.342). The interdependent system occurs when the contingencies are applied to a level of group performance--either a class as a whole or a part of a class, e.g. teams.

While this division initially seemed helpful, an attempt to "fit" the studies reviewed into the framework became very confusing. It is often difficult to ascertain whether the same response contingencies are in effect for all group members. For example, Litow and Pumroy (1975) classify Patterson's (1966) work with Karl as a "dependent" situation but I feel the contingencies for Karl did not apply to the whole classroom. Similarly, the study on contingent teacher attention (Becker et al., 1967) incorporated rules for the whole class and special rules for the target children so it is difficult to fit the study into one of Litow and Pumroy's categories.

O'Leary and O'Leary (1976) comment

...a whole continuum of procedures exists in which the procedures have

in common not necessarily a group "contingency" but rather a group or class "consequence" (p.482).

Patterson's work is at one end of this continuum (Type I) in which one or more targeted children earn rewards contingent upon their behavior, but share them with the class. The work by the Patterson group at the Oregon Research Institute subsequent to the intervention with Karl further refined this approach (Ray, Shaw & Cobb, 1970; Cobb et al. (1971). If one considers a less harassed, more praising teacher to be a reward for a whole class, the work by Becker et al. (1967) and Thomas et al. (1968) would also be included here, as would the O'Leary et al (1970) investigation of the effects of loud and soft reprimands.

The middle point on the continuum (Type II) is occupied by studies in which contingencies are on the individual child's behavior but the behavior of all the children in the class is considered in awarding the consequence. Greenwood et al. (1977) continuing in the Oregon tradition, used this technique in studying the effectiveness of the Program for Academic Survival Skills.

When all students were engaged in survival skills according to the teacher's rules, the teacher turned on a light and clock...(These) remained on as long as all students were behaving appropriately. As soon as one child broke a skill rule, the teacher turned off the light and clock (p.29).

Extra recess and free time in class were dependent upon the class improving the percentage of time spent

following rules.

The Good Behavior Game (Barrish, Saunders & Wolf, 1969) uses similar principles of reward and the further analysis of the components of the game by Harris and Sherman (1973) found that permission to leave school early, the number of marks chosen as a criterion for both teams to win and the division of students into teams were all effective ingredients. Feedback was not found to be effective in reducing disruptive behavior. The Principle Game (Darsch & Thorpe, 1977) is a variation on a similar theme which however, could be limited to individual consequences for individual behavior.

A combination of individual and group consequences may be found in Ascare and Axelrod's (1973) probe for effectiveness of a behavioral approach in an open area system. Students' work behavior could earn points for free time for themselves and also for their homeroom classmates when the total number of points for all subjects in the classroom reached a predetermined level. This is also a component of a study by Kirshner and Levin (1975). Once again, these techniques effectively improved the behavior of the subjects.

The third type of consequence described by O'Leary and O'Leary (1976) only involves the individual child indirectly --a reward is dependent upon the entire class' behavior, not the behavior of the individual child. This presupposes that the target behavior is a group behavior and so is a

limited approach. O'Leary and O'Leary report that there is little or no difference in effectiveness between individual and group contingencies or small differences in favor of the latter. Litow and Pumroy (1975) found no studies which explicitly assess the effectiveness of dependent group contingencies in controlling behaviors of entire classes, although they did control the behaviors of target children. One would not really expect dependent systems to control the behaviors of entire classes. However seven studies found no differences between the independent and interdependent methods in obtaining control of an entire class, while six studies found interdependent methods (e.g. The Good Behavior Game) to be more effective. One study found the opposite to be true.

The evidence on the comparative effectiveness of reward systems is still inconclusive. One of the difficulties is the confusion over how to classify the studies. Nevertheless, it does seem safe to conclude that there are a variety of approaches one may take to structuring consequences for an intervention, which are effective. A guideline may be whether the focus is on the behavior of the individual, in which case dependent systems are most appropriate, or on the entire class, in which case interdependent systems would be preferred.

There have also been studies of home-based reinforcement of school behavior (Darsch & Thorpe, 1977; Fixsen et

al., 1973) and of contingency contracting (Stuart & Lott, 1972) but these are not relevant to this practicum.

#### Issues in the use of rewards

Other issues in implementing rewards are:

1. Who controls and dispenses the reward?
2. What type of reward is to be offered?
3. Which rewards are most effective?
4. Whether punishment is an appropriate or effective component of the program?
5. How are generalization and maintenance of behaviors built in to the reward/punishment program?
6. Whether only external rewards/punishments will be used, or if self instruction and self monitoring is also appropriate?

Who controls the reward? It is obvious that in a classroom situation the child's teacher and peers are in control of immediate reinforcement, while parents may have some delayed control. This, together with the emphasis on early preventive mental health has encouraged teachers to become involved in early identification programs and the treatment of troubled children. Conversations over the years with teachers and principals have underlined a slightly different problem. Educators complain that traditional approaches to child treatment remove the child from the environment in which the difficulties may be occurring and focus on the

child in his family. This leaves the school to cope (with marginal practical advice) on its own for the duration of treatment. Many educators are frankly skeptical about the effectiveness of treatment. The early reports of success in bringing disruptive behavior under control through behavioral interventions have caused teachers to become interested in trying the techniques.

For the teacher who wants to go it alone there are several publications available ranging from Clarizio and Yelon's (1967) brief outline of procedures, to the more complete general account provided by Patterson and Guillion (1968) or to the guides specifically aimed at classroom interventions (Buckley & Walker, 1970; Carter, 1972). However, I know of no outcome studies of classroom programs which have not had consultant input. Informal discussions however, have led me to believe these attempts have not been overwhelmingly successful. Kuypurs, Becker and O'Leary (1968) suggest some reasons for this failure and one suspects that basically it is due to the teachers' lack of knowledge of the fundamental principles underlying the approach, perhaps a failure to choose appropriate goals and the inability of one person to achieve control over a multitude of moving parts.

There are many published accounts of programs involving a "teacher-consultant" approach. These may be placed along a continuum. At one end the teacher identifies the

children, records their behavior, and implements the treatment. The consultant provides advice and encouragement. Ascare and Axelrod (1973) used this system--teachers rated the behavior of the children every ten minutes during all phases of the A B A B study, recorded their findings and administered the treatment, which involved feedback and points exchangeable for free time. The consultant "coordinated the record keeping and administrative aspects of the behavior modification program" (p.284). Reliability checks on the four teachers were performed by student teachers, and presumably the outcome analysis was done by the consultant. The successful outcome of the study is encouraging for teachers who wish to run their programs independent of the intrusion of outside observers.

The midpoint of the continuum is occupied by several studies in which the observations and recordings of behavior are done by the consultant or people he has trained, but the teacher controls the reinforcers and implements the program. The consultant is generally responsible for the formal analysis of data regarding the results. Included in this genre are the studies by Becker et al., 1967; Blanchard and Johnson, 1973; Brooks and Snow, 1972; Darsch and Thorpe, 1977; Greenwood et al., 1977; Greiger, 1970; O'Leary et al., 1970; O'Leary, Becker, Evans and Saudargas, 1969; Parker, 1974; Thomas et al., 1968; Wilson and Williams, 1973.

The Becker group of studies comment on the difficulties encountered when teachers try to "change" their

behaviors in order to change the behaviors of the children they teach. It is not that teachers fail to attend or respond to children, but that they respond inappropriately. Madsen, Madsen, Saudargas, Hammond and Egar (1970) found that 77% of teacher interactions with children were negative. It is also noted that frequently attention is provided to a child who misbehaves, thus increasing the chance of future misdeeds (assuming "attention" is rewarding to the child). Patterson (1969) agrees, and cites data showing that teachers reinforce adaptive behavior on very lean schedules. He suggests that while middle class children may respond under such lean schedules the immature child may not have been trained in skills necessary to survival in the educational system and so may be unable to secure his share of the very limited supply of rewards.

Cobb et al., (1971) point out a further problem. It takes time for the behavioral program to produce change. It requires that the teachers in the interim continue to apply the program consistently in the face of its apparent failure. Teachers, even with the best intentions may give up--either blatantly or more subtly by failing to attend to the fine details. The authors recommend strongly that the teachers must be reinforced for their participation and that their behavior must be monitored in as non-threatening a manner as possible.

All of which was summarized by one teacher of a

chaotic grade one class--"Good grief--how can you expect me to do all that when it's all I can do now to keep them from creating havoc. Already, I have no time to teach, which is what I'm paid for."

This brings us to the other end of the continuum. Here the therapist not only observes and records the behavior of the children, but, in consultation with the teacher, identifies target behaviors and reinforcers and dispenses them. The therapist is initially in sole control of the reinforcers. As might be expected, this approach is most thoroughly exemplified by Cobb et al., 1971; Patterson, 1969; Ray et al., 1970, all of whom report successful treatment outcomes from well designed studies of the children as well as anecdotal evidence of teacher satisfaction.

Another approach to relieving teachers who find themselves in the midst of twenty-five shouting voices, raised hands and other general confusion, is seen in recent studies which have examined whether peers can monitor the behavior and control reinforcers for disruptive classmates. Solomon and Wahler (1973) have demonstrated this to be effective in a sixth grade class by training the five most popular students to use their attention appropriately and systematically to modify the behavior of five disruptive classmates. The theoretical rationale (as opposed to the practical reason) for using peers is that they naturally provide rewards to their fellow classmates for both social and antisocial

behaviors. If they can be encouraged to reinforce pro-social behavior it is assumed that treatment effects are likely to persist after the consultant and formal program are withdrawn. Walker and Buckley (cited in Cobb et al., 1971) found that peer training was the most effective means of maintaining treatment effects in a regular classroom.

The Cobb et al. study is similar in its use of peers to the earlier Patterson and Brodsky (1966) study. The three authors explained to the peers that they were in part responsible for the disruptive behavior of the target child and that they could help him by ignoring these behaviors. The behaviors were clearly delineated and listed. In order to reinforce their behavior, they participated in a decision on what reinforcers would be used for the day and these were shared--e.g. they had a stake in the procedure.

McGee, Kaufman and Nussen (1977) concluded after their review of the literature on children as therapeutic change agents that their effectiveness had been demonstrated in a variety of settings. Of interest in this practicum are the findings that even kindergarten children can discriminate and reinforce appropriate peer behavior. The use of peers as therapists, however may not free the teacher of an added burden as the therapists must also be trained and reinforced. It would perhaps be most helpful if the therapist-consultant would undertake this task. This approach is more complex than Patterson's--the child therapist may be

trained to record the behavior of his peer and to reinforce it directly rather than merely to share the rewards the peer has earned. Strain, Cooke and Apolloni (1976) are in essential agreement with these comments.

This review of the literature suggests that it may be necessary to have the therapist intervene directly in the classroom at the beginning of treatment. This relieves the teacher of assuming several additional tasks or modifying her own behavior at the same time that she begins a program. It also provides an in vivo, low response-cost demonstration to the teacher of the effectiveness of the approach and allows her to model her behavior on that of the therapist. In order to avoid a situation arising in which the children perform appropriately only for the therapist, it is essential to transfer the program as quickly as possible to the teacher.

The type of reinforcer. The debate over the ethics of using tangible reinforcers in the classroom continues (see Hodges, Brophy and Good (1972) for a summary of the various positions). The issue is confused by the failure to clearly define the distinction being made between the two. For example, some authors refer to primary and secondary reinforcers. A primary reinforcer is generally equated with an unconditioned reinforcer (e.g. food) and secondary reinforcers with a conditioned reinforcer (e.g. praise). O'Leary, Poulous and Devine (1972) refer to "extrinsic"

and "natural" reinforcers and use as examples of the latter weekend visits to one's home, recess, etc. However, they later speak of "positive concrete reinforcers" and "positive social reinforcers". It is difficult to decide whether a visit home or extra recess is "positive concrete", "positive social"; "extrinsic" or "natural". The distinction made by other writers between tangible and intangible reinforcers suffers from similar fuzziness--is extra recess tangible or intangible? Certainly tokens are tangible, they can be touched. However they may be redeemed for an outing--a conditioned reward, or food, an unconditioned reinforcer. Are points tangible because they can be seen? Then how about a smile? It can both be seen and touched, but is generally considered a conditioned reinforcer. Is it then, intangible? The general use has been to roughly equate tangible, primary, concrete and extrinsic rewards (e.g. Ascare and Axelrod, 1973; McMillan, 1973; Patterson & Brodsky, 1966), and intangible, secondary, social and intrinsic (Becker et al., 1967; O'Leary et al., 1972).

Bearing in mind that the distinction is far from clear the reader is referred to the O'Leary et al. (1972) excellent summary of the objections to the use of tangible reinforcers and their rejoinder.

Much has been made of concern that tangible rewards are bribes. It is my view that all reinforcers are bribes in the sense that they are attempts to influence a line of

conduct. Given that social workers, psychologists and teachers are in the business of "influencing a given line of conduct" the central questions become "when is it ethical to influence conduct?" and "what means are ethical?" Once these questions are addressed it is apparent that it is unethical to attempt to change behavior by any but the most effective means. If tangible reinforcers are the most effective means, they must be used. That is not to say that they should continue to be used after the behavior occurs regularly, or that all interventions should begin with tangible rewards. I agree with the approach suggested by Lobitz and Burns (1977) that the least intrusive intervention is the best beginning. I also agree with the vast majority of workers who verbalize the need to transfer from tangible to intangible rewards as quickly as possible.

One study of interest because of its focus on disadvantaged ghetto children suggests that the concerns expressed in the literature about bribery may be unique to academic, middle-class audiences. McMillan (1973) paid sixth graders 40¢ for math papers in which they received grades of 80% or higher. While there was a significantly higher rate of response during the reinforcement condition, in practical terms reinforcement accounted for less than two percent of the variance. More instructive for our purposes was the incidental discovery that a) parents had no objection to the use of the tangible reward, and b) the

students indicated that tangible rewards were relatively unimportant to them--extra educational materials and "feeling proud" of doing well were more important. This also points up the necessity of determining the reinforcers to be used on the basis of knowledge of the individual client's preferences, rather than the worker's preconceived notions.

Most of the school programs built on tangible reinforcers employ a token system in which tokens or points can be exchanged at a designated time for backup reinforcers. Ray et al., (1970) describe the "nitty-gritty" details involved in one such program. A measure of the effectiveness of token economies is that in less than a decade at least 100 token reinforcement programs have been established in the U.S. and many of these are in classrooms (O'Leary & Drabman, 1971). The paradigm on which token economies are based is: by pairing a neutral stimulus (token) with one primary reinforcer, the token acquires secondary reinforcing properties: by pairing a token with more than one primary reinforcer, the token becomes a generalized reinforcer which maintains its value in spite of varying levels of satiation or deprivation for a single reinforcer. Hence it is important to provide a variety of backup reinforcers initially.

Token economies in regular classrooms have been used by Cobb et al. (1971), O'Leary et al. (1968), Ascare and



Axelrod (1973), and Harris and Sherman (1973), among others working in regular classrooms. They have been reported effective in a) decreasing disruptive behavior, and b) increasing study behavior in regular classrooms. However, the reports need to be viewed circumspectly. Often the studies use a combination of techniques of which the token system is only a part, but the design does not permit comment on the relative effectiveness of each component. Similarly, it is impossible to say with precision which behaviors are most influenced by token treatments because there is great variation in behavioral definition. Finally, although most children do respond positively to programs including token economy, some do not--it is perhaps as important to discover the reasons for failure as it is to describe success.

Which rewards are most effective? I found only one study (Clingman, Auerbach, Bowman & Parrish, 1974) that evaluated the relative effectiveness of candy, social rewards and tokens with children. The results showed that I.Q. scores increased considerably under a token system, social rewards produced minor changes and candy produced no change when administered contingently. However, it is questionable whether similar results would be garnered if the dependent variable changed.

Currently, behavior modification programs provide a combination of primary and secondary rewards which seem to

be effective in reducing conduct disordered behavior in classrooms (Kent & O'Leary, 1976). However, little can be said authoritatively about which are the crucial components of a token economy or the relative effectiveness of concrete and social rewards.

Blanchard and Johnson (1973) made a stab at determining the relative effectiveness of various types of operant programs in their study of generalization and maintenance effects. They found that for one class only tangible individually administered rewards changed behavior, while for another everything except ignoring increased appropriate behavior.

This study illustrates the difficulties inherent in teasing out controlling variables. There were only ten subjects. The personality of the teacher may confound replication. The treatments were only in place for one week. Kazdin (1976) would be concerned about the effects of serial dependency. As a result, the conclusions must be regarded only as tentative.

The use of punishment. There is a commonly expressed belief that behavioral approaches rely in large part on aversive measures to establish control, but the regular classroom literature is evidence of the falsity of this view. Teachers have been advised to ignore disruptive behavior (unless it is dangerous), to use soft instead of loud reprimands and to attend to appropriate behavior. O'Leary

and O'Leary (1976) confirm the rarity of experimental articles on the effectiveness of punishment in schools and delineate some of the practical and ethical problems inherent in investigating and using punishment as part of a treatment program.

It is important to remember that punishment may be said to occur only when the behavior is subsequently weakened. It may take the form of either the presentation of an aversive stimulus or the withdrawal of a positive reinforcer (O'Leary & O'Leary, 1976).

Patterson and his co-workers have frequently used "time out from reinforcement" to control dangerous or seriously disruptive children. However O'Leary and O'Leary (1977) comment that Patterson's home town has resounded with "cries of torture chamber treatment". Concern with whether and under what conditions (Patterson & White, undated) time out works has given rise to concern with its ethical use. Stringent guidelines for use in special educational settings are provided by Gast and Nelson (1977) and the worker in the regular classroom would do well to behave accordingly.

O'Leary and O'Leary (1976) found only one study of response cost in a normal classroom...that of McLaughlin and Malaby in 1972. In 1976, Hundert studied "the effectiveness of reinforcement, response cost and mixed programs on classroom behaviors". In the response cost phase tokens were given at the start of a period, and withdrawn for

inattention and inadequate arithmetic performance. The mixed phase was similar to "response cost" in the McLaughlin-Malaby study. There was no evidence of differential effects across the three procedures for either attention or arithmetic performance.

Building in generalization and maintenance. Early attempts at behavior modification in schools were, reasonably enough, concerned to demonstrate its effectiveness in reducing disruptive behavior. With this done, there have been three emergent concerns. Will the change carry over from the treatment situation to other areas--e.g. If Johnny sits still and attends to his math will he also sit still and listen to his English teacher? Even more adventurous--will he also attend to his parents? Will the changes endure over time? Can Johnny be taught to control his own behavior?

For a decade, psychologists have commented on the need to program generalization and maintenance. Now the effectiveness of specific variables is beginning to be put to the test (see Wehman, Abramson and Norman (1977) for a review of studies of components of generalization in special education). O'Leary and Drabman (1971) comment on the difficulty of this endeavor in view of the fact that generalization depends on a number of procedures beginning simultaneously, thus excluding the possibility of demonstrating control in a within-subject design by introducing and removing one variable at a time.

Ideally, the aim of any change program is to bring the treated child's behavior under the control of appropriate available reinforcers similar or identical to those which motivate his peers in the regular classroom. It has been shown that careful structuring of rewards and remedial help can produce appropriate behavior in many cases. However, this behavior may fail to occur when rewards are withdrawn (failure to maintain) or it may only occur in the setting in which rewards were provided (failure to generalize).

Early studies recognized the importance of fading rewards from continuous to variable schedules (Patterson and Brodsky, 1966; Ray, Shaw & Cobb, 1970) as well as from primary to secondary rewards (Greiger, 1970), and asked whether gains in remedial classrooms would transfer to regular rooms (Thomas et al., 1968). However, only two studies attempt to systematically investigate effectiveness of programming the environment to enhance generalization and maintenance.

Walker et al. (1972) report two experiments demonstrating thorough conceptualization, careful designs and sophisticated analysis of data. Experiment I asked whether behavior changes in a special classroom would generalize to a regular classroom and whether instructing, supervising and reinforcing the teacher of a regular classroom in behavior modification procedures would enhance maintenance

of these changes during a four month follow up. Upon completion of training in a remedial classroom (using tokens, response cost and social reinforcement) the appropriate behavior of all the children had increased dramatically. The first group of children had been in remedial class from October to January and then were placed in classes with "behavioral" teachers for the remainder of the year. Group II children were in a remedial class from February-June and received no maintenance procedures when they returned to regular classrooms. Both groups were followed for the first third of the next school year and during this time the Group I children were not in "behavioral" classes.

Both groups at follow up had increased their baseline rates of appropriate behavior, but the mean for Group I subjects averaged 80.25% as opposed to 64.75% for Group II. Thus appropriate behavior was maintained much better for Group I subjects. The authors are cautiously optimistic that the added reinforcement provided by the behavioral teachers was responsible for the greater maintenance of the gains in Group I. However they caution that the lack of a control group obviates the possibility of making definitive cause-effect statements. Also, there was a concrete reward for teachers of children who demonstrated improvement--a luxury most workers cannot provide.

Blanchard and Johnson's (1975) study of the effectiveness of various operant methods also probed their generalization effects. They found that in one class under both

group and individual tangible reward conditions behaviors generalized to a second teacher (who did not use rewards), but in the second class no generalization effects were found. Their methodology, however, creates the need to be circumspect in drawing conclusions from this study.

The Stokes and Baer article (1977) sheds light on the type of generalization procedure most often employed in regular classrooms. The early studies (Patterson, 1965; Becker et al., 1967; Thomas et al., 1968) were largely of the train and hope variety. As classroom intervention became more sophisticated, workers took care to work, where possible, in situations which provided "natural maintaining contingencies". Studies involving "indiscriminable contingencies" have been discussed on page 48. In some cases (e.g. Patterson and Brodsky, 1966; Williamson, 1977a) these had to be programmed. Meichenbaum and Goodman's (1971) study (see page 52) may be seen as an example of "mediated generalization"

(This requires establishing a response as part of new learning that is likely to be utilized in other problems as well and thus result in generalization (Stokes & Baer, 1977, p.366).

There is even today a paucity of empirical evidence which isolates critical components for generalization and maintenance of treatment. Like mothering, everyone agrees it is a good thing, but no one is sure how to go about doing it most effectively. Nevertheless, the authorities

are ready with suggestions which are assumed to be helpful. O'Leary and Drabman's (1971) guidelines are:

1. Provide a good academic program as well as a behavioral program.
2. Give the child the expectation that he is able to do well.
3. Involve the child in the selection of the behaviors to be rewarded and the selection of rewards.
4. Teach children that academic achievement will pay off.
5. Involve the parents.
6. Transfer from tokens etc. to natural reinforcers-- through fading contingencies and altering schedules of reinforcement.
7. Reinforce the child in a wide variety of settings.
8. Teach the teacher to follow through (see McKeown, Adams and Forehand, 1974 for a review of investigations of results from teaching teachers to use Behavior Modification).
9. Reinforce everyone in the whole school system.
10. Teach the children to evaluate their own behavior.

Stokes and Baer (1977) provide other "what-to-do" possibilities.

Monitoring and reinforcing one's own behavior. The most recent approach to this problem of generalization is to teach the individual to monitor and record his own behavior, set his own standards and reward himself for good behavior--

an approach which recognizes the importance of cognitive factors in producing change (Mahoney, 1974). This is called "self control of behavior" (McLaughlin, 1976).

Our main concern here is with the transfer of control from an external reinforcer to an internally administered reward. There are some studies which probe the usefulness of self control techniques without prior external reinforcement. These are reviewed by McLaughlin (1976) who notes that they are confounded by design problems.

When one reviews the literature on self control with children who have previously experienced external reinforcement, it is apparent that it also suffers greatly from confounding effects. Compared with the admittedly equivocal (but nevertheless encouraging) research on the effectiveness of external rewards, self control research is a babe in the woods. The hopeful indications and the possible pitfalls are well documented in McLaughlin's review (1976). The general conclusion is that

several researchers have found that experience with external reinforcement procedures can aid in maintaining behavior change in self control strategies. Other studies have failed to report maintenance with self control procedures. However, pupils who had extensive experience with systematic reinforcement seem to maintain their behavior gains with self control procedures (pp.643-4).

This evidence relates only to behavior in the same setting --there is no data about generalization to new settings.

Self instruction as a method of behavior change

McLaughlin's review (1976) is relevant to children evaluating and reinforcing their own behavior. Other studies deal with techniques which may teach children to perform more adequately through self instruction or talking to themselves. This is based on the premise that the child who is impulsive or performing poorly is deficient in some area. The developing child is thought to go through stages when he

1. does not mediate or regulate his overt behavior verbally
2. does not spontaneously produce relevant mediators and
3. does not comprehend the nature of the problem in order to discover what mediators to produce (Bem, 1970).

A training program should therefore provide explicit training in these areas, and this is one component of the treatment Meichenbaum and Goodman (1971) describe. The second strategy manipulated the child's verbalizations and examined resulting changes in non verbal behavior. Research suggests a progression from external to internal control of behavior by speech. The cognitive self guidance program devised by the authors follows the developmental sequence

by which overt verbalizations of an adult, followed by the child's overt self verbalizations, followed by covert self verbalization would result in the child's own verbal control over his behavior (p.116).

Their study employed random assignment of subjects to either treatment, attention or control groups--a departure

from the within subject designs seen in the prior pages. The results from multiple "t" comparisons indicated that the treatment group was significantly different from the others on picture arrangement, coding and prorated I.Q. scores of the WISC. The treatment group also increased the time it took to make decisions and although there was no significant difference in error scores, the trend suggested the treated group had improved. However, the area with which I was concerned--conduct in the classroom--showed no significant between-group differences.

Bandura's (1969) work on modelling has convinced most practitioners of its importance in treatment. Meichenbaum and Goodman (1971), recognizing this, attempted to determine whether modelling was the effective component of their self guidance procedure, but discovered that modelling plus self instruction was more effective than modelling alone in altering decision time and in reducing errors.

This approach, which reiterates the need to provide remedial instruction to overcome deficits which may be "causing" problem behavior, is certainly promising particularly in light of Bornstein and Quevillon's (1976) repetition of the basic components with more dramatic positive results. In three conduct disordered kindergarten children "On task" behavior improved from 10.4% to 77.8% for Tim and similarly for the other children. Three month follow up indicated that gains had maintained. Since this

was a within-subject, multiple baseline study across subjects, it is relatively free of confounding.

#### Effect of behavior change on self concept

Perhaps the crucial question to the worker concerned with promoting greater happiness for her client is whether behavior change in one area affects the self concept of the client?

The question of whether self concept improves concomitantly with treatment is only beginning to receive attention. Parker (1974) using a Solomon four group design, modified the disruptive behavior of two groups of second and fourth graders and tested them on four criterion variables--total self concept, school related self concept, personal adjustment and social adjustment. Those children in the contingency management program for eight weeks showed substantially higher mean total and school related self concept scores than did controls. As usual these findings are supported by some research and refuted by other studies and it is impossible to sort all the factors influencing the different results. Nevertheless, it does provide another avenue of inquiry which many may wish to follow in attempting to discover the ultimate usefulness of behavior modification programs.

## Methodology in studies of behavior interventions in schools

Sulzer-Azaroff and Mayer (1977) comment that behavior analysis, through its careful choice of research design demonstrates functional cause-effect relationships between interventions and behavior change. The basic design is a within subject (n=1) approach. Hersen and Barlow (1976) outline the elements which must be present before a design can claim to demonstrate cause-effect relationships. These include: repeated frequent measurement, establishing a baseline, changing one variable at a time, withdrawing treatment, establishing phases of adequate length and evaluating irreversible procedures through multiple baseline designs.

The issue of measurement has been given a great deal of attention in the literature. Hersen and Barlow state that the operations must be clearly specified, observable, public and replicable in all respects. The studies which have been discussed have generally paid considerable attention to operational definition of the behaviors they have studied.

### Operational definition of the target behavior

There is a plethora of coding systems available which define behaviors: ranging from the very simple (Bornstein & Quevillon, 1976) to the incredibly complex (Cobb & Hops, 1972). Generally the target behavior is classified "attending" or "not attending" and broken down into

components in which the desired response, the situation in which it is to occur and the criteria for determining whether it has occurred are clear. An example of this is "Working".

The subject or peer is working on academic material without any overt verbal components either in a group or individual seatwork setting. Two examples are: the child following along in a reading book as another child reads a passage, and the child writing answers in a workbook. Any activity that is considered part of the curriculum by the teacher is considered work if the child is engaged in the activity without any overt component, etc. (Cobb & Hops, 1972, p.28).

While the Cobb, Hops manual is excellent in its definitions of behavior (36 behaviors are listed) and its provision for recording antecedent and consequent events, it also shows the difficulty the applied practitioner encounters in trying to replicate the work done by groups in highly sophisticated settings. It is difficult to obtain and train observers to use this manual effectively given limited resources and time. Compromises must be made and workers frequently devise their own systems for coding and recoding. These are usually based on other systems (Abikoff, Gittleman-Klein & Klein, 1977; Bersoff & Erickson, 1971; Kent & O'Leary, 1976; Kubany & Slogett, 1973; Wahler, House & Stambaugh, 1976).

### Observation and recording

Once a target behavior is operationalized, it becomes necessary to develop a system for observing and recording it.

Since conduct disordered behaviors usually do not have discrete, countable, beginnings and endings, and because the duration of the behavior is usually of secondary importance (except for example, temper tantrums), investigators generally employ some variation of the interval method of recording. The intervals vary according to the author's preference and the behaviors to be measured--Forness and Esveldt (1975) used 6-second intervals in identifying "at risk" children; Walker et al. (1972) used 30-second intervals for observing children and parents in their homes; O'Leary et al. (1970) used a 20-second observe, 10-second record intervals to measure "disruptive" behavior. The most popular seems to be the 10-second interval (Blanchard & Johnson, 1973; Christy, 1975; Greiger, Kauffman & Greiger, 1976; Thomas et al., 1968; Wahler, 1969; Wilson & Williams, 1973). This may involve simultaneous recording or an "observe x-seconds, record y-seconds" condition. Gelfand and Hartman (1975) underline the need for consistency in recording. Behavior may be counted as occurring on the basis of the proportion of the interval during which it took place, in which case a whole interval, or partial interval system (Sulzer-Azaroff & Mayer, 1977) may be

used. If the system requires that the response be occurring at the moment when the interval ends, a momentary time sampling system is preferred\_\_\_e.g. The Timer Game (Wolf et al., 1970). If one is interested only in whether an event occurred and if it has a clearly defined beginning and ending, event recording may be used. Classroom studies have generally used either whole interval or the partial interval time sampling procedures. The former is especially useful for on-task behavior, as it provides some idea of whether the behavior is interrupted but it does tend to underestimate the occurrences of the behavior. Interval time sampling is said to be useful for behaviors which occur every fifteen minutes, are not discrete and if the worker is more concerned with their occurrence than their length of continuation.

The majority of school work has employed non-participant observers to monitor behavior, although a few (Barrish & Saunders, 1969; Harris & Sherman, 1973; Wolf et al., 1970) have relied on teachers, and others on self monitoring (McLaughlin, 1976). The observers must be able to both measure and record behaviors.

#### Precise measurement

"Precise measurement requires the selection and implementation of objective, valid and reliable measures" (Sulzer-Azeroff & Mayer, 1977, p.49).

Objectivity. The objectivity of measurements by non-participant observers has been questioned, particularly when they are aware of the purposes and conditions of the study. Furthermore, Webb (1966) cites evidence which shows their presence may produce changes in behavior but that this effect erodes over time. Patterson and Harris (1968) however demonstrated that observer presence did produce behavior which differed from the usual activity of the family. In an effort to control these threats to internal validity, observers are warned to be unobtrusive, non responsive and generally to melt into the wall. It is expected that this will improve the validity of the data.

Measure validity. The use of measure validity is not emphasized in the literature, and one wonders whether it is the skeleton in the behavior modification closet. The worker must ensure that the behavior being sampled is representative of the behavior with which she is concerned. This is measure validity. The assumption in the literature appears to be that careful definition of the problem, with accurate observation, ensures measure validity. If one is concerned with aggression and observes hitting, kicking and punching--these are valid measures. However this issue is not clearly explained. The observation code chosen must be able to record accurately, the frequency, intensity and/or duration of the behavior in question. If, for example, compliance is measured in a whole interval time

sample, the data may seriously underestimate the occurrence of the behavior as compliance can be a very fleeting thing--not lasting a full 30 seconds.

Internal validity. Internal validity is the ability to attribute outcome to treatment, ruling out extraneous variables. Campbell and Stanley (1963) outline 12 threats to internal validity, 5 of which Gelfand and Hartman consider applicable in single case designs. These are history, maturation, testing (and observation--my addition), instrumentation (criteria for scorable responses may change throughout the study), and statistical regression--a child selected for his deviancy will tend to score less deviantly on further measurement. Hersen and Barlow (1976) discuss at length other elements which must be present in n=1 research designs if outcome is to be attributed to the intervention.

1. Validity is threatened if observations are not reliable, and there is much said about the importance of reliability. Gelfand and Hartman (1975) devote two pages to internal validity, but devote a whole chapter to reliability. The premise is that behavioral data are reliable to the degree that measurements from independent observers are consistent or in agreement. This of course necessitates data gathered by two or more independent observers who are generally expected to agree on the occurrence of the target behavior at least 80% of the time. This is generally calculated by

the percent agreement method--

$$- \frac{\text{number of agreements}}{\text{number of agreements} + \text{disagreements}} \times 100$$

when interval recording has been used (Gelfand & Hartman, 1975). All studies reviewed in this paper have reported reliability data which reached the 80% criterion level.

Because observer accuracy tends to decline over time, a phenomena known as observer drift, it is recommended that an additional or third observer spot check the accuracy of the regular observers. Patterson and Harris (1968) found this an effective method of maintaining high rates of agreement. Practical limitations may preclude adherence to the rigorous standards advocated by Wildman and Erickson (1977). These include long periods of training as a group in settings approximating those in which the study will take place. The authors suggest samples of behaviors be videotaped, and conditions for assessing agreement should be maintained. They favour observation of videotaped behavior of the subject rather than in situ observation, and emphasize the need for observers to be naive about the purpose of the study. The ability to infer cause-effect relationships is greatly inhibited when compromises are made.

2. Internal validity is strengthened when Hersen and Barlow's (1976) rigorous standards for collection of baseline data are met. They argue that a baseline should be extended until it is stable, but recognize the difficulty of this. Their practical criterion of three data points

is generally met, however, varying from four days (Wahler, 1969), to five weeks (Becker et al., 1967). The reservations in interpreting increasing, or decreasing, or variable baselines when treatment does not clearly shift the direction of the baseline should be noted.

3. The Cardinal rule of single case research--manipulation of one variable at a time--is frequently violated.

Careful reading of the research is at times necessary if one is to assess whether the rule has been violated. For example, two procedures can be combined and evaluated as one variable--e.g. Wahler (1969) combines time out and differential attention and considers them as one variable. Since there is no attempt to evaluate the relative effectiveness of the two procedures, it is acceptable to attribute change to the combined procedures. Blanchard and Johnson's (1973) study of whether several procedures were effective and whether they generalized to another classroom appears to violate the rule of altering one variable (a procedure) at a time (A-B-A-C-A-BC-A-D-A-E instead of A-B-A-B-BC-B-BC etc.). Again, they did not attempt to evaluate relative effectiveness so the design is not faulty.

4. The ability to establish the role of treatment in "causing" behavior change depends also on the inclusion of a reversal phase of the design. Without it there are threats to validity from maturation, history, testing,

instrumentation and regression. There are some researchers who are scrupulous in their attention to this: Greiger et al. (1976); O'Leary et al. (1970); Walker et al. (1972), Experiment II; Wilson and Williams (1973); Wolf et al. (1970), Experiment I. These demonstrate effectiveness with a return to baseline and then reinstate the treatment phase to avoid ethical problems of withdrawing an effective treatment.

Other studies are seriously weakened by their neglect of this phase--including Becker et al. (1967), Greiger (1970), and Ray et al. (1970).

It is only fair to comment that most of the authors acknowledge the limitations their design places on their conclusions and in the last few years designs appear to be more rigorous.

5. Recognizing that reversal phases may be deleterious for the client, and may be tainted by instructions which were given during treatment phases, some researchers are turning to multiple baseline studies (e.g. Christy, 1975). Here the same procedures are applied to different children at different times, or to different problems in the same child. There is no reversal phase. If there is a change in all the children, the change may then be attributed to the intervention.

6. Well done single case research has been the backbone of behavioral classroom intervention. It allows the researcher to focus on the individual and skirts the problems of generalization from the average response of a group to an

individual. However, there remain some questions which are best addressed with group designs.

The study which best highlights the new directions in behavioral research in schools is Kent and O'Leary's "Controlled evaluation of behavior modification with conduct problem children" (1976). These authors suggest that the assessment of behavior modification in classrooms has been based on conditions which may not obtain across settings in which most school psychologists (and social workers!) find themselves. The advantages provided by a research setting may have led to an overestimation of the effectiveness of child behavior modification in outpatient settings. The few studies of outpatient treatment lack randomly selected control groups as well as follow up data, objective measures of change obtained from persons other than the therapist or client, measures of academic as well as behavioral change, a highly specified, replicable treatment program; or a large homogeneous population. This study meets all of these criteria. The finding that

measures of academic achievement, grades, direct observation in the classroom and teacher ratings also indicated significantly greater improvements in treated than untreated children (p. 595).

is encouraging indeed. Hopefully this research will be the keystone upon which other replications will build more definitive knowledge about the parameters of effective behavioral intervention in the classroom.

### Data analysis

Corresponding to the broadening horizons in design, there are new directions in analysis of data from behavioral research. Both "t" and "F" tests were frequently used in group designs, along with ANOVA, to determine if there were significant treatment effects (e.g. Patterson's group). Often it is felt such detailed analysis is not necessary in single subject research when a visual examination of graphical data along treatment phases confirms that a change has taken place. Furthermore, a case can be made that improvement or change should be measured clinically--e.g. whether the client and/or therapist is satisfied with amount and direction of change--and not statistically at all. While this suggestion has considerable merit, especially from a client's point of view, it involves subjective assessment rather than hard data so one would hope to assess change both statistically and clinically as well as visually. The chapter by Kadzin (1976) in Hersen and Barlow will provide the interested reader with comments on the inadequacy of the "t", "F" and ANOVA analyses of time sequence data as well as direction for the appropriate analysis of this data in n=1 research. However, this may involve the use of sophisticated computer programs which are not available to the worker in an applied setting.

At the present time behavior modification in the

regular classroom reflects changes that have occurred over the past ten years in the field as a whole. The initial enthusiasm generated by the laboratory demonstration of powerful techniques for changing behavior has given way to a concern with their usefulness in applied settings. The emphasis on modifying observable behavior remains a primary concern, but there is now more interest in exploring the cognitive aspects of behavior. There is recognition that a program of behavior change must involve more than manipulating schedules of reinforcement, and must first consider whether it is more appropriate to change the system in which the behavior occurs. Kent and O'Leary (1976) have shown that the use of control groups is applicable to research in applied settings and Kadzin (1976) has made a case for sophisticated data analysis. There is recognition that the claims made by some researchers may not be entirely valid (see for example the Patterson-Kent (1976) exchange on the analysis of Patterson's 1974 data). Such honest admitting of the limitations and questions raised are welcome and will hopefully result in more useful techniques for the practitioner.

This overview of the literature provided some background against which to begin the practicum. It should be noted that the intervention took as given the traditional social work emphasis on acknowledging the importance of thoughts and feelings...this aspect of the work has not

been reviewed, but salient issues are discussed in the individual case reports. Chapters V, VI and VII particularly emphasize the need to deal with thoughts and feelings as they influence current behavior. The difference lies in not expecting behavior to change as a corollary of uncovering the thoughts and feelings. Instead, the need to structure opportunities for relearning is emphasized.

## CHAPTER II: ELECTIVE MUTISM

### Setting for the Practicum

There are two physically adjacent kindergartens in a large (700 children) school in the core area of Winnipeg. It is here the practicum was conducted. The school serves a working class, multi-ethnic population which includes Portuguese, Italian, Filipino and Native Canadians. It also serves a day care program for staff of a large hospital in the vicinity. Class A has 22 children enrolled in the morning session. Class B has 23, most of whom had attended nursery school last year. A breakdown of ethnic characteristics of the classes is found in Table 1. Despite half of each class having English as a second language, the teacher aides were withdrawn from the classes on September 31--two weeks after the practicum began. There was usually a student in each classroom from the Early Childhood Education Program at a local high school. In addition, the school's English-Second Language Aide spent 4 out of 6 days in one class or the other. Thus, the staff consisted of one teacher, a student helper, an ESL aide and the writer, who spent the first month as a participant observer, and the remaining 7 months as a combination caseworker and teacher's helper (when time permitted).

TABLE 1  
Ethnic Background of Children in Kindergarten

Ethnic background	Class A	Class B
Italian	2	2
Portuguese	5	5
Filipino	4	4
Native Canadian	1	2
Negro	1	3
Metis	3	0
Japanese	0	7
Other	<u>6</u>	<u>5</u>
Total	22	23

Note:--Data as of September 24. Numbers varied slightly as children transferred, but the proportion remained fairly stable.

The placement was arranged through Child Guidance Clinic but they provided no agency services or supervision. In most senses the worker was on her own, without agency backing. Supervision was provided by members of the practicum committee on an "as needed" basis. Support from the school staff was excellent.

In all, I worked intensively with one group; two electively mute children and three conduct disordered children. Originally, I had expected to limit the practicum to individual conduct disordered children, but expanded the parameters to meet the needs of the teacher whose class was highly disruptive and the two children who did not speak. The work with the electively mute children is described immediately following. The intervention with the conduct disordered children, which was the largest part of the practicum, is dealt with later.

#### Elective Mutism and Reluctant Speech

Initially the practicum was planned to focus on "acting-out" children. However it became apparent that two children in Class B were not talking. It was decided to use a behavioral approach to encourage them to speak.

#### Definition of "elective mutism"

Until 1977, there was general concensus in the literature that children who are silent among all but a selected group of intimates could be called "(s)elective mutes"

(Bauermeister & Jemail, 1975; Calligan, Calligan & Dilliard, 1977; Friedman & Karagan, 1973; Halpern, Hammond & Cohen, 1971; Norman & Broman, 1970; Rasbury, 1974; Rosenbaum & Kellman, 1973; Scott, 1977; Van der Kooy & Webster, 1975; Wulbert, Nyman, Snow & Owens, 1973). These children speak normally when they are with their intimates.

Wulbert et al. define electively mute children behaviorally as "those who speak only in restricted stimulus settings" (p.435). In their 1977b article, Williamson et al. take issue with this global term.

...elective mutism...is characterized by normal speech in one environment and no speech in another....A related speaking problem...can be described as "reluctant speech". It differs from elective mutism for though there is normal frequency of speech under one set of stimulus conditions, there is very low frequency of speech in others. (p.151).

They argue that the distinction is critical for the selection of appropriate treatment procedure.

### Etiology

Explanation of the development of elective mutism depends of course upon the theoretical school of the therapist. In reviewing the literature, Halpern et al. found that until 1969, thinking had been divided "concerning elective mutism as a neurotic reaction or as a personality trait disturbance". (p.95). A combination of conditions is thought to contribute to its occurrence:

1. a predisposing constitutional hypersensitivity to instinctual drives (manifested by social reticence),
2. a traumatically experienced event during a critical period of language development (belittling the child's attempt to speak),
3. an insecure environment (fearful, overprotective or anxious parents),
4. a psychological fixation (utilizing mutism as a principal fear reduction mechanism),
5. a neurotic symptom compromise arising out of familial conflicts involving talking, openness and dependency (concern with family secrets). (Halpern et al., p.95)

In keeping with the social learning roots of behavioral approaches, Reid (1963) conceives of the concept as "an abnormal psychogenic reaction which may be viewed as learned (avoidance) behavior dependent on a variety of precipitating factors" (cited in Scott, 1977, p.263).

Another facet of the behavior is its oppositional nature. Salfield (1959) provides an analytic explanation of this:

Since young children go through a phase in which they exhibit a fear of strangers normally, the unusually long retention of this reaction... may initiate the maintenance of archaic mutism as an autonomy-enhancing mechanism and as a defense against intrusion of unfamiliar influences into the ego (cited in Halpern, 1971, p.96).

Analytic explanations have also seen mutism as an attempt at control of oral aggressive and anal destructive fantasies (Browne, 1962, cited in Halpern, p.96).

Freidman and Karagan (1973) comment: "in general electively mute children can be divided into two groups. The first group appears to use refusal to speak in a coercive fashion in order to manipulate the immediate environment" (p.250). This will be taken up later in reference to one of the children. Although it has not been fully explored in the literature, it raises the possibility of a tie-in to conduct disorders.

It is assumed that the child, perhaps because of his "hypersensitivity" or some pairing of a stimulus and aversive consequence, finds situations in which speech is required are highly anxiety laden. The child learns to avoid the anxiety by refusing to speak.

Others (e.g. Wulbert), emphasize that speech is under stimulus control of a very few intimates in the child's environment. This of course, does not rule out the role of anxiety and avoidance in the presence of strangers, but does have implications for treatment.

#### Characteristics of electively mute children

1. The most often mentioned attribute of these children is their shyness and reticence in all but a few situations and with all but a few people.
2. The children speak normally at home to a select group.

3. They are generally of average intelligence although this may be in doubt. (They cannot be tested until they have writing skills.)
4. Their early development is normal except for speech.
5. They are not isolated from other children despite their failure to speak. In fact they appear to receive considerable attention for not speaking and to be protected by their peer group from having to speak.
6. Some speak English as a second language.
7. Many come from families which are physically or socially isolated and in which the parents are themselves shy.
8. They first come to attention when they enter school.

#### Treatment approaches

##### Analytic treatment

Treatment arises out of theory. Analysts describe milieu and intensive individual therapy, as well as a combination of play therapy and parent counselling. The evidence is that these have generally been ineffective in removing refusal to talk (Halpern et al., 1971).

The "middle ground" approaches between behavior modification and analytic methods assist the child in "relearning social responses with 'assiduous encouragement' of even the most timid responses of self expression and reduction of reinforcement of silence" (Colligan et al., 1977, p.10). However Elson's long term investigation of a group of mute children concluded that "superficial

counselling, suggestion or exhortation were quite ineffective, as were our attempts at insight or uncovering psychotherapy" (cited in Freidman and Karagan, 1972, p.249).

### Behavioral approaches

Desensitization. Finally, behavioral treatments have been attempted with some success. In 1966, Brison reported a case in which reinforcement and ignoring produced speech. He commented that he "did not approach the case from the viewpoint of a behavioral therapist, although the final treatment plan can...be analysed in these terms". Since that time, behavioral reports have proliferated. Some have focussed on the anxiety component of the speech block and used desensitization "since the observable symptoms of tension and withdrawal appeared to be antagonistic to the production of speech" (Scott, p.264). Others (Freidman and Karagan, 1973; Norman and Broman, 1970; Rosenbaum & Kellman, 1973), comment on the need for the subject to have a warm and trusting relationship with the therapist, but they do not specifically detail a step by step desensitization program.

Stimulus fading. Stimulus fading has been a popular approach to the problem and arises out of the idea that speech is under the control of a discriminative stimulus. Wulbert et al. (1977) have explicated this approach very thoroughly, as have Conrad, R. D., Delk, J. L., and Williams, C. (1974). Here, a different person is

gradually introduced into the treatment setting after the child is responding routinely to the experimenter. As the new person is able to expect routine responding, more people are introduced until the subject can be counted upon to reply to verbalizations from a number of people in a natural setting. The setting change is also made in a series of carefully planned and monitored small steps. The outcome of this approach has been encouraging. Wulbert et al. (1977) found that time out alone did not produce speech, but was effective in combination with stimulus fading.

Positive reinforcement. All programs included reinforcement either for participation (Wulbert et al, 1973) or on a contingent basis when speech was produced (Bauermeister & Jemail, 1975) or approximated (Colligan et al, 1977; Nolan & Pence, 1970; Norman & Bruman, 1970). In some cases group contingencies were evoked (Williamson et al., 1977a). Initially all responses were reinforced and then as speaking became better established reinforcement was faded. Both social rewards (Norman and Broman) and tangible reinforcers were used, sometimes both were employed. Some reinforcers were powerful--e.g. roller skates (Williamson et al., 1977a), and bicycles (Bauermeister and Jemail, 1975). In all but one case (Bauermeister & Jemail) the children left the room for treatment until speech had been established. These writers report success using teachers

to administer social and tangible rewards to a child in the classroom and make no attempt to alter the stimulus conditions controlling speech.

Avoidance training. In contrast to rewarding speech, three studies report success with an avoidance paradigm. In each case (Halpern et al., 1971; Van der Kooy & Webster, 1975; Williamson et al., 1977a) a child could be released from an aversive situation only after he spoke. Again, the children acquired speech.

The majority of the studies employed some combination of desensitization, stimulus fading, shaping, positive reinforcement, avoidance training and time out in eliciting speech. The question is: which methods should be used under what conditions? Perhaps the final words should belong to Williamson et al.

The first step and probably the most important, is to empirically determine under what environmental conditions the child will speak, even if the frequency is low. If the child is speaking to most persons in the test environment but at a low frequency, then the problem is really one of reluctant speech and contingency management procedures should be used to increase its frequency in appropriate environments. If the child speaks only to a few people... but not to others in a test environment, then stimulus fading procedures should be used to bring the child's verbal behavior gradually under the control of new persons. Finally if the child does not talk at all in the presence of anyone in the test environment then the therapist can

either shape the child's verbal behavior or employ an avoidance procedure. (1977a, p.148)

The writer agrees with this rigorous approach to assessment, but found some difficulty in applying it to two children.

It is encouraging that all the studies which provided follow up data show that speech was maintained after the program ended.

"F"...anxious or non-compliant? A case study

#### Background

F's background does not deviate from the characteristically electively mute child. He is the fifth of six children in a Portuguese speaking family. The mother has a full time job and the father works at two part time jobs. F is cared for by an indulgent grandmother. The family came to Canada when F was two, and maintains any social ties it may have time for with the Portuguese community. F's brother also did not speak to the teacher or in a group until the last month of kindergarten, although he did talk to peers on occasion. F did not speak at all in nursery school last year. He is a small, rotund fellow, who has a hearing problem. The nurse thought that he was in fact deaf, and did not have any speech. The teacher and the worker thought that he did hear most of the time, but chose not to hear when it suited him...he certainly had no trouble hearing that it was time to have a movie, even

when his back was turned.

During the Early Identification Program screening (Appendix 2) he would or could not participate in the gross motor testing or in the Sprigle Test. He also had great difficulty with fine motor tasks. As a result he was placed in a remedial gross motor program. The hearing tests revealed that he did have a hearing impairment and would require surgery for impaction during the year. However, he did not respond to any of the audio stimuli so no accurate assessment of the degree of impairment could be made.

#### Pre-treatment assessment

Informal. On the first day in the class, the worker identified F as non compliant, and noticed that while he did not speak to either the teacher or the worker, he did to some of the children. He also reacted to being touched by an adult by cringing and ducking out of the way. He was able to mime his needs both to the children to whom he did not speak and to the adults in the class. His wishes were generally fulfilled in this manner. It was also interesting to hear the other children verbalize his wishes and answer questions directed at him. In discussion with the teacher, it became clear that another child, W, was causing her much more difficulty and so attention was deflected from F for some time. Having taught F's brother last year the teacher expected that F's rather bizarre behaviors

would disappear eventually, as had his brother's.

A month later, his motor behaviors had not changed but the worker did hear him counting aloud during a number game with W. When she asked him to do it again, louder, he did. During this interval, F had often joined the worker and W in play, and had occasionally spoken in a whisper to the toys, his head tucked into his chest, but never directly to the worker. He had once shouted out a response of one word during the group time, but had never spoken to the teacher.

Formal. At this point it was decided to try and increase his speech, and on November 9th he was observed. Any speech to an adult was recorded, as was any speech to a child. The words were just copied down. During the three days of baseline there was some speech, when observations were made during playtime.

Interview with the parents. There was no interview with the parents as they were unavailable. When the mother came in for her interview with the teacher, the worker was not available but the program to increase F's speech was explained to the mother who was agreeable. At this time she told the teacher:

1. F does speak Portuguese at home in normal tone and frequency.
2. He answers the telephone in both languages.

3. He speaks rarely to anyone outside the family and only after a great deal of prompting.
4. The grandmother anticipates his needs most of the time.
5. The only thing he really enjoys doing is watching TV and he does that a great deal.

Discussion with the teacher. While the worker was concerned at what appeared to be F's high rate of non compliance, in talking to the teacher it was decided that modifying that behavior might further suppress his speech. We agreed to focus first on developing speech and then, if necessary, to tackle the non compliance. At this point we were still not clear about how much his hearing was impairing his speech, how much command of English he did have, or about how the worker could be rewarding to F who avoided all contact with adults, except on his own limited terms.

Hearing ability. It was important to find out how much F did hear before a program was implemented. The worker began whispering the verbal responses necessary in the number game. Since F was looking at his cards at this time, he could not move correctly unless he heard the worker. He did not miss a move or need a repetition. Next, the worker would approach him from behind and say quietly that he could come and play with a favored toy. He always came immediately. This confirmed that his hearing was good enough to begin a speech program.

### Behavioral formulation

Although F had one characteristic of an electively mute child (no speech in the presence of the teacher), it was apparent from the observation that he more closely conformed to the description of a reluctant speaker. He did speak a single word to some of his friends (although he would not respond to a direct question from anyone), and he had answered once in the group and had once responded verbally to a direct request from the worker.

It was thought that his lack of speech was being maintained at school by the attention he received from the adults and the children in the class. It may have had an anxiety reducing function. There appeared to also be an element of non compliance in his refusal to reply to requests for speech, and this was consistent with the oppositional behavior which pervaded his presence. When asked a question, he turned away and went about doing what he wanted. When given a direction, he did the same thing. Finally it became apparent through careful observation that the other children spoke for him, so he had no need to make his wishes known. Initially this deflected attention from his speechlessness.

### Treatment

Phase I: November 9-15. Following baseline observation a treatment strategy was suggested. F would be referred to a specialist for an ear examination. The behavioral goals

were: to establish a relationship; and to elicit a one word response to the worker's questions.

The worker embarked on an unstructured plan to build her relationship with F by further engaging him in activities he enjoyed. (At this stage all activities were occurring in the classroom.) Whenever he wanted to terminate the activity, no attempt was made to encourage him to remain. It was expected that he would soon initiate the contact, and after a day this happened regularly. Each time he approached the worker he was rewarded by the worker doing whatever he indicated he wished to do. He routinely chose a number recognition game.

Phase II: November 16-26. The second week, November 16th, F was told we would continue the game only if he responded to questions about it. Since the game allowed the worker to ask questions that required a one word answer, which F had given in play with friends, it was expected that the situation would not be terribly anxiety arousing. Treatment provided rewards for responding and response cost for failure to talk. In order to capitalize on the fact that F's speech was under the discriminative stimulus of a few friends, they were always included in the game, and it was thought that there would be some generalization to the worker. (The children were told of the contingency.) The teacher was asked not to coax him to speak but to continue asking him questions.

At the end of this week, F was responding inconsistently to direct questions about the game or in free time. He regularly sought the worker to provide needs--e.g. tying his shoelaces, but would not answer her questions or converse in any way outside of the game situation. At this point a reassessment was completed, and results are indicated in Table 2.

This reassessment led to the establishment of an altered treatment plan. Having established a consistent one word response with friends and an inconsistent one word response with the worker, the next step was to generalize the response from friends to peers and to establish consistent responding to the worker's questions during the trials. A tape recorder was introduced to the whole class and children were invited to come in small groups to talk into it. (The tape recorder has been used in some studies (e.g. Norman & Broman, 1970) to accustom children to the sound of their own voices, and the worker thought this would help F as well.) At first he refused to talk into it but controlling the buttons while others talked was great fun for him. In this way he was encouraged to interact, albeit nonverbally, with new children, from a position of power. On some occasions when they attempted to control the buttons, he was driven to shout "No! Me."...his first communication with them.

Having discovered a powerful reinforcer, the worker

TABLE 2  
Behavioral Formulation: Reassessment

Stimulus	Response	Consequence
Spoken to or questioned by close friends	One word reply... normal or loud tone	Praise from worker, no response from friends
Questioned by worker during game	Inconsistent one word reply, low volume, no eye contact	Praise plus reward, the game goes on. If there is no response, game ends and peers angry.
Questioned by teacher	No reply, moves away	Ignored by teacher
Asked to comply	Agrees if he enjoys activity, ignores request and moves away if he doesn't	Praise, attention if he agrees. Placed on chair, or ignored if he refuses. Refusal provides escape from aversive activity.

told F that if he wanted to operate the buttons, he would have to talk into the microphone when the worker asked him a question. He initially refused, and the worker shaped his behavior by having him first blow, then hum, then make animal noises into the microphone. In one trial, he produced a hesitant and quiet one word response to a request to count some animals in a book. After this one word responses were consistently required.

Peers and friends were asked not to reply for him. They were allowed to continue using the recorder even if F was not allowed to operate the controls.

In other situations, normal requests to talk were made but his lack of response was not attended to by adults.

Since he always mimed the request that the worker tie his shoes, he was told that he would now have to say "tie" before she would comply. He was told he could whisper, which he did, head tucked down and torso twisted away. Unfortunately, this was not as consistent as it should have been as other helpers in the class responded to having the boot thrust under their noses by tying it.

Although F still refused trial when the mood struck and still responded very inconsistently, it was apparent that he was talking more with his friends and other peers ...responses of more than one word were frequent and in fact he often tried to talk so fast he stuttered. The

range of his vocabulary was amazing. However, his friends were finding it very hard not to respond on his behalf.

Phase III: November 27-December 31. At this point I felt another reassessment would be helpful. Hypothesizing that F's inconsistent responding may have been due to the attention he received from his peers who gathered around the tape recorder during trials and to their willingness to serve as his mouthpiece, it was decided to take him out of the room for trials. This was explained to him. It proved to be a disaster. Although he came to the playroom willingly, as soon as the door was shut, he tried to escape and was obviously terrified. Feeling it would be counterproductive to keep him in such a state of anxiety and not being comfortable with the avoidance paradigm, in which he had to speak before being allowed to leave, we returned quickly to the room, where another trial was offered and refused. For the remainder of the week, the worker and F used the tape recorder alone in the classroom until the responses could again be elicited. Unfortunately the program was interrupted because the worker's attention was absorbed by the conduct disordered children and F was away a great deal. It began again on January 4.

Phase IV: January 7-19. At a meeting of the practicum committee, the worker was advised to try once more to work with F outside the classroom in order to establish the worker as a S<sup>D</sup> for speech. In order to formally generalize

speech to the worker from the control by a few friends, it was decided to include a particularly good friend in the session. To reduce the anxiety associated with leaving the classroom, not only would a friend come along, but in the first session there would be no attempt to elicit speech. It was hoped that the friend would be a good model for fearlessness in a new situation and talking in the playroom. The Adventure People were provided as a reward for coming. (This was not a new idea for F who had been seen to watch with interest as W left the classroom daily carrying the large yellow bag containing the Adventure People.) These had already achieved a high status as a reward for "good behavior". As F showed no fear, the next day a game was introduced in which he was required to identify with one word each thing he wished to play with.

In addition, the worker continued to require that he ask her to tie his shoes and other approaches from the teacher and peers were unchanged.

On January 9th, encouraged by the response the previous day, the worker requested a two word response and F refused, so the following day one word was requested. It was clear during the play time after the formal trial that F was indeed talking to his friend consistently in phrases of several words. The worker interpreted this to mean that the refusal on January 7th was more of a non compliant

nature than a result of inability to perform. On January 11th, two words were requested and given consistently. In addition, the worker became much more formal in her requests and carefully asked each time: "What do you want next, F?" Thus, the treatment was expanded not only to produce more words but to train a response to a formal direct question about his wishes.

F also had considerable pressure and prompting from his friend when he did not answer the questions at a fast enough rate to obtain the toys quickly. The program was still basically positive reinforcement and response cost.

Two days later F refused to come into the playroom.

Worker: Who is coming with us today, F?"

F: Not me! (Log, January 14)

The worker accepted this and tried to elicit one word responses to questions during play in the classroom. (He also had, however, responded to the worker's advisor when he was asked about animals in a book.) Clearly F was interested to see what I would do next and I speculated that the non compliance issue had reared its head again. It was decided to offer him a choice of where we would go to work. The following day he wanted to go to the hall and there consistently said one word. Later two words were demanded before he received a toy. He needed several prompts, but did reply. From this point responding became consistent. On January 19th the worker heard F volunteer

two answers during group time, observed him holding conversations consisting of several phrases with peers in the classroom and he responded to a question the teacher asked him in a one to one situation.

Phase V: January 20-29. Data indicated that F could and would speak to adults when he desired. Was his lack of speech merely non compliance? The data also indicated that his response to adults was limited to the worker and the teacher and to one or two words. It was decided to focus on increasing his rate and length of responses to the worker and the teacher, generalizing those responses to other adults. The specific goals were:

1. F would respond to any academic question (non personal) posed by any adult in the school. (Throughout the work with F it had become clear that he was very unwilling to respond to any personal question...he refused all attempts to elicit information about the other members of the family, or what he did at home. This is congruent with the theory that reluctant speech may in part be maintained by a family injunction about sharing family secrets. Only in the very late stages of the work was he willing to tell the worker even the names of his siblings. This concern was respected throughout and questions focussed on non personal items.)
2. His response should be verbal, loud enough to hear when standing a normal distance away and should be sufficiently clear that it did not have to be repeated.

3. The response should be more than one word.
4. F would respond to the resource teacher when she tried to test him with the Sprigle Test of School Readiness.

The plan to require three word responses during the trials was not necessary as whole sentences were emitted without prompting.

The other adults in the classroom were encouraged to direct questions which required a one word response. The English Second Language teacher was asked to take him in a group with the other children. Observation indicated that his responding was inconsistent, and appeared to be dictated by his desire to comply or not.

Phase VI: January 30-March 23. It was becoming increasingly clear that the problem was no longer one of reluctant speech but of non compliance. At this point I wanted to continue working on increased speech and to begin a contingency program for non compliance. This was prevented when I was advised that F was scheduled to have an ear operation in the near future. It seemed more important to focus on speech generalization if he was soon to find himself in a threatening new environment. It was thought this situation could be exacerbated if F refused to talk to the hospital staff.

I hoped it might be possible to kill two birds with one stone (decrease non compliance and encourage generalization) if the Adventure People were made available in the

classroom sandbox contingent on F replying to questions from the adults in the room...specifically, the teacher and myself. In order to obtain the toys, F had to request them from me. He could ask for them on a friend's behalf as well as for himself. Once they were obtained, they remained as long as F answered questions. Each time he refused one toy was removed. It was hoped that this would increase requests he initiated and the number of questions he answered. It had an element of avoidance training in that he could only escape peer pressure by asking and replying. It was hoped this would increase compliance.

In addition, the teacher began to be much more consistent in removing F to a chair away from the group when he refused her requests that he do as he was asked.

Again the program was interrupted when F was away for approximately six weeks. This constituted a lengthy reversal phase. On his return, he was shy for a few days and refused to come with the worker. His behavior was marked by non compliance and the treatment focussed on consistent enforcement of the time out contingency. His speech in the classroom returned quickly to its previous level. Unfortunately, before the non compliance could be dealt with, the practicum ended and simultaneously, F's family moved to Montreal.

### Recording of progress

1. There was simply a count of words F uttered during an observation period or trial. The number of words was divided by the number of minutes of observation to produce an "average words per minute" count.
2. Log notes provided information on the intensity of volume, the people F talked with and a subjective assessment of how much he talked in periods when he was not being formally observed.
3. During Phase VI the number of questions refused in class was monitored throughout the morning.

### Progress during treatment

Figure 1 indicates that F did not respond at all during baseline. There is no data for Phase I which was a relationship building stage. Phase II showed that low rate and inconsistent responding had been established. In fact F's fear when he was taken out of class on November 27th was a definite set back. There was some improvement during Phase III as there was some response on every trial although it did not reach the high levels in the previous phases. In Phase IV both the number of words per minute during the trial and during conversation were recorded. During trials, the average words per minute ranged from zero (when F refused the trial) to 26.2, a marked improvement over the high of 4.8 (November 22nd) in the previous phases. In Phase V there was only one data point--21.6

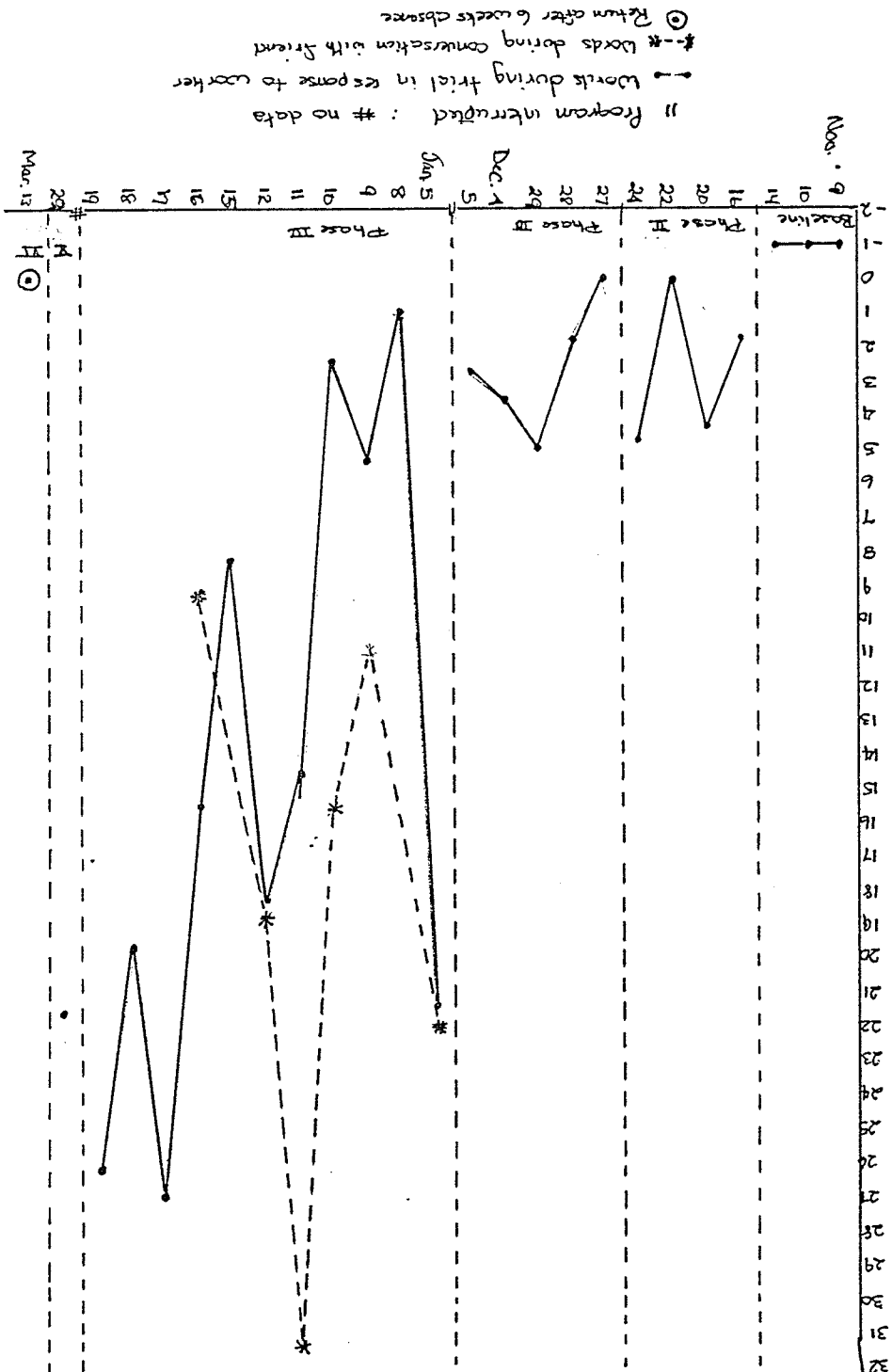


Figure 1: Average Number of Words Per Minute

words per minute during the trial--before the worker decided responding was sufficiently well established that the focus should be on the number of questions that were answered in class.

In Phase VI the range of questions not answered was 0-1 on four days when F was present.

My notes indicate that he was then absent for several weeks and on his return his speaking behavior had disappeared altogether. The following day, however, he spoke freely to the children in the class, the worker, the teacher, the English Second Language teacher, the principal, and the student teacher, as well as in the group. It did not seem necessary to monitor his speech any further, and it did not diminish between March 14th and the end of April when he moved. The Resource teacher was able to administer the Sprigle Test and his score was satisfactory for his age.

#### Evaluation of outcome

It is clear that there was an increase in the frequency of F's speech and that it generalized from a few people to most people in his environment. He did respond to academic questions from the English Second Language teacher and the student in the classroom as well as from the teacher and the worker. However, the second goal was not achieved, for his responses to strangers tended to be very quiet and frequently they had to be prompted, then

repeated. They also tended to be as brief as possible, except when the teacher or worker was involved. However, the most important immediate goal, that he could be tested, was achieved.

The problem of non compliance was only dealt with peripherally, and there is no data to indicate whether it had increased or decreased during the school year.

The increase in speech from baseline to intervention phase and the return to speechlessness after F's long absence may give some support to an attempt to attribute the outcome to the intervention. However this is confounded by the fact that F did indeed speak during his stay in the hospital, and the worker's intuition that his refusal to speak on his return was a part of his testing the limits. Furthermore, one must remember that without any intervention his brother had acquired some speech during the course of the kindergarten year and the threat to validity posed by maturation must be considered a serious confound.

In terms of social significance, though, it is encouraging to comment that F's speech had transferred to a hospital setting, that it had increased in school and that the test results indicate that he had the potential to do adequately academically.

### Discussion

Throughout the year, I was plagued by the possibility that the wrong behavior had been targeted. Perhaps if F's

speech had been based on non compliance this should have been the focus and both problems would have been alleviated simultaneously. The implications of attempting this type of intervention with a child who also presented as very shy and fearful of new situations made this approach distasteful. The avoidance paradigm had been successful in some cases, and that success casts doubts on the idea that intervention must begin with a reduction of anxiety. However, I feared that such an approach would eliminate speech altogether, and was not willing to take the risk. It was thought that once speech had been established to the point that meaningful communication on a verbal level could occur, there would be time to tackle the non compliance. It would follow that if F could tell me what he was thinking and feeling, and which contemporary events were effecting his behavior, that approach would be more fruitful. Unfortunately, this did not happen before he moved away.

It was challenging to try and find ways of talking to F without mentioning personal experiences and without setting the stage for non compliance. The frustration I experienced when F refused trials was acute and the temptation to go to an avoidance model was great. Fortunately the refusal was never protracted and gains were made without changing the program drastically.

The opportunity to use peers as behavior modifiers

was not exploited in any systematic fashion, but I am optimistic that even very young children can learn quickly to prompt appropriate behavior when there is some reward for them. Throughout, I tried to diminish the occasions when there was confrontation between myself and F, but the peers did not shy away from making demands on him. On occasion this produced a response which he had been unwilling to make for me.

In retrospect, I wish I had more rigorous data to support the alleged gains...for example, a record of how often he spoke to adults and for how long. On the whole though, I am encouraged by the results, which might have been expected to maintain in normal circumstances.

Worker as consultant in a case of elective mutism:  
A summary of work with "S"

### Background

S, like F, is from a large Portuguese family. Her father is reported to be a meticulous and clever craftsman, who is a seasonal worker and looks after the children while the mother works during the winter. S apparently did not speak in nursery school last year and cried every day while her father was away in Portugal for six weeks. She is a beautiful child with large brown eyes, dark skin and hair and a shy grin.

### Assessment

S was brought to my attention by the teacher in early

December because she did not speak. I had known that S was shy, but had not noticed her total lack of speech. Although S was occupied happily with the various activities of the day, and was often with a group of children, it became clear that she did not speak at all. This appeared to be a clear case of elective mutism. She was exceptionally compliant and a favoured playmate for the other children. She most frequently spent time with her cousin who would talk for her whenever speech was necessary. In January we noticed that S would often cry when it was time to do the art and when it was time to go home. All our efforts to find out what was wrong were fruitless...she just cried more until her father arrived to rescue her.

The interpreter talked to the father who asked S if she was unhappy at school and she said "no". She talks a great deal at home, in fact it is hard to get a word in edgewise. We thought the crying might reflect anxiety that the father would not come for her and fear that her art work would not meet approval from her perfectionist father. He was asked to praise all her work, and to be at the school a few minutes before dismissal. A warm and friendly man who tried (despite the language barrier) to talk with me whenever he came for S, he willingly complied. The crying diminished, but did not stop. At this time her cousin had found new friends and was less readily available to run interference for S. It was suspected that

since she did not have anyone close anymore and was unwilling to speak, she was feeling very sad. A program to get her to talk was instituted at once with the teacher as the therapist and the worker as the consultant.

#### Data collection

There was no formal method of data collection, except that the teacher kept a record of which words S had said.

#### Establishing rewards

The search for reinforcers did not take long. Clearly S enjoyed a variety of games and the teacher's attention.

#### Treatment

Desensitization and shaping. The teacher began the program asking if S would like to look at a book with her. The teacher asked questions about the pictures and when S did not reply, used that opportunity to explain how important it was that she talk to us and how happy it would make us. She also said that it was not necessary that S speak loudly, a whisper was fine. When the second trial did not elicit a response, the teacher reiterated her reasons for wanting S to talk and said that if she was too shy, she could just nod her head yes or no. This was in S's repertoire and she did respond.

Operant program. After some time the teacher told S that she could not keep reading unless she answered the questions

she had been asked, and S did reply in a very quiet voice. From this time the program continued using the teacher's attention and praise as rewards for speech, increasing the demands in a step like fashion until a one word response at normal volume was elicited regularly. This took two months during which trials were held daily for ten minutes while I managed the class and kept the other children away. New reinforcers were added and the teacher was advised to keep questions impersonal.

Generalization. I tried to get S to generalize her speaking to include me and after two weeks, S would whisper responses to the worker at very low volume. All attempts at verbalization were praised and much attention was received from the other children, which both delighted and frightened this shy child. One day during the fourth week the teacher was away and I invited S to work with me. The response rate was consistent when S knew the English word, although she did require prompting and the volume was low. She actually smiled and chuckled out loud at the funny bits of the book.

#### Outcome

After this, the teacher asked for a two word response and was working on establishing this reliably when a student from a psychology class taught by one of the practicum advisors took over the program. Although I do not have the student's data, it was clear that S's speech had increased

and did generalize to friends.

### Discussion

This part of the practicum was valuable chiefly for the opportunity to act in a consultative capacity and to determine whether the program which had been effective with F, a reluctant speaker, would also work for S, an elective mute. The teacher was not asked to keep data as rigorously as had been done for F. She only managed to have time alone with S because the worker was available to manage the class during that time. She was, however, effective in eliciting speech, in dispensing rewards contingently and in increasing both volume and frequency of speech. This generalized to the worker first and then to the English Second Language teacher, but not to peers until that was specifically planned. It is doubtful that most teachers would be able to train speech unless they had help in the room. However, the promising outcome of the work with these two children certainly indicates that the behavioral approach should be taught to teachers and teacher's aides in schools where elective mutism is a problem. There was no difficulty in identifying reinforcers readily available and the trials were relatively short. The help provided by the children's playmates hints too that there may be other potential therapists in the classroom.

CHAPTER III: SPIDER-MAN; A GROUP INTERVENTION  
WITH DISRUPTIVE CHILDREN

While most of the work with conduct disordered children has focussed on the effect one child has in the classroom, it is also possible to be faced with a class in which several children act to create a climate of total confusion. I commented earlier that it might be considered "overkill" to label the conduct of each member of a class as disordered. Nevertheless it may be necessary to modify the behavior of several members before any semblance of order can be achieved. This has the advantage of not focussing attention on any one child and labelling him "deviant". Instead of individual or group rewards being contingent upon the behavior of one individual (Becker et al., 1967; O'Leary et al., 1969) the individual is rewarded on the basis of the performance of the entire class or some subgroup of the class of which the individual is a member (Barrish et al., 1969; Harris & Sherman, 1973; Medland & Stachnik, 1972). There is an attempt to reduce the disruptiveness of the class by reinforcing attending behavior. This was the approach adopted in Class B as part of the practicum.

### Rationale for Intervening

A child's introduction to school is often a trying experience and a period of accommodation is usually allowed before any "academic" material is introduced to kindergarten. Before this can be done, children must be able to sit still for short periods of time and to listen to the teacher. Despite the fact that several of the children in Class A had attended nursery school and might have been expected to know how to do these things, the atmosphere remained chaotic after one month.

Today it seemed like I was inside a washing machine, the water was moving in every possible direction within a confined space. There was considerable agitation and all our efforts to keep the lid on were only momentarily effective (Practicum Log: September 25).

The teacher, who was quite tolerant of activity and aware of individual levels of ability to sit quietly, was becoming very discouraged at her inability to maintain order during the two short periods in which the children were required to sit on a carpet and listen to her describe the day's activities. She said she had tried everything she knew to decrease the commotion during these group times, short of being very aversive. Since most of the children appeared to be involved in the melee, it was decided to use group contingencies to try and lower the rate of disruption during the group time at the beginning of the morning. The intervention took place during October.

## Assessment

### Retreatment assessment

Pre-treatment assessment began on September 26th with observation of each child for 20 seconds in the group time from 11:15 to 11:30 a.m. (Appendix 3; Code A). This allowed two observations per child. Disruption was defined as touching another child, talking out loud without permission and being out of area, and was tallied each time it occurred during the 20 seconds of observation. The definition of "touch" was changed on September 28th to "reach out and touch" as it appeared that mere physical contact was not disruptive. On September 29th the code was finalized to include six definitions of disruptive behavior. (Appendix 3: Code A, revision I). This code is based on the work of Medland and Stachnik (1972) who used a one minute observation interval and scored only the beginning event in the disruptive chain.

Data confirmed that most children were disruptive at one time or another (only one was not) and that some of the children were highly disruptive according to the definitions in the code. In a class of 23 there were an average of 15 disruptions per group session, ranging from a low of two to a high of 57. The range of disruptions per child was 0-8. Once, 10 children were disruptive four or more times during a session.

Observation of the teacher indicated that she frequently

attended to behaviors which were disruptive and failed to reward children who were sitting quietly and listening. In particular she listened to people who are talking out of turn. She recognized that this was a problem for her. She was very concerned that the children like her and was unwilling to be nasty when they failed to conform to her expectations. In addition she was not explicit in telling the children exactly what "paying attention" meant.

This assessment led me to want to use an intervention in which I would carry the responsibility for the implementation of the contingencies. This would remove the teacher from the "bad guy" role and hopefully would also provide her with an alternate model.

In choosing a strategy of approach, a consideration of the material presented earlier in the paper (p. ) led to a decision to try to revise the "Good Behavior Game" (Appendix 4) for use of five year olds.

#### Treatment goals

The goal was to reduce the number of disruptions to a level with which the teacher could cope. The worker's inexperience resulted in a failure to operationally define what that level would be. "Success" was vaguely described as having been achieved when the teacher no longer felt that she was constantly having to deal with disruption during the group time, and could get on with teaching. (The inadequacy of this criterion was evident, but in the

absence of normative data about how much disruptiveness is too much, I am not sure whether any other criterion would have had clinical significance. Undoubtedly, demonstration that the average number of disruptive episodes or the range of disruptions per child had decreased by a certain percentage would have been a better experimental yardstick by which to measure success or failure of the program.)

I also hoped to model that firm limits do not necessarily destroy an adult's relationship with the children; to help the teacher specify clearly the components of "good" behavior during group time; and to help her attend consistently to "good" behavior while ignoring disruption in the form of talking out without permission.

#### Treatment

##### Phase I: Positive reinforcement

On October 10th, the Good Behavior Game (Appendix 4) was introduced during the first group session. The Barrish et al. (1969) model had to be modified to meet the needs of a younger group of children. In order that they could distinguish their team members, name "cats" were made from green and orange cardboard. Team membership was predetermined to ensure that there were an equal number of highly disruptive children in each group. Since the children had no concept of numbers, points could not be used to indicate success. Instead, a pumpkin was cut from felt, as were two eyes, a nose, a mouth and a lid. It was explained

that I would be observing the teams and each time I saw all the team members doing as they were asked, a piece of the face would be placed on the pumpkin belonging to that team. (One pumpkin had a green piece of paper and the other an orange paper pinned under it.) A team could earn a reward by completing the face on the pumpkin. Initially the observation interval was one minute, which allowed at least fifteen chances to place five features on the face and win. This ensured success. These intervals were to be lengthened as stable performance was achieved.

The expectations were explained: (a) sit with your bottom on the floor, (b) no talking unless the teacher asks you, and (c) no pushing, fighting or touching other children. (Reinforcing behavior incompatible with disruption.)

The children were asked what they would like to do when their team won. Suggestions chosen from a "reinforcement menu" were: going outside for a walk, extra time to paint, going to the gym, blowing bubbles and carving a pumpkin. (Since one child had little English comprehension, the interpreter was asked to explain the game to him. The remaining English Second Language children had sufficient grasp to understand the rudiments of the program.)

Phase II: Reinforcement, positive practise and modelling

On October 12th a second component of the treatment program was introduced when one group failed to win the reward. They were given a verbal explanation of why they

had not succeeded and they were required to practise the desired behavior for a period of three minutes before they could proceed to the gym. I modelled the behavior as well. This incorporated modelling, verbal instructions and positive practise. This combination was used whenever a team did not win.

On October 16th, intervals of observation were extended from one minute to two and then three minutes as the behavior was very good.

On October 23rd, the reward was discussed before the contingencies were in effect in the hope this would provide more incentive to the group and a large drawing of Spider-Man sitting quietly with his hands in his lap was introduced, both as a model of the expected behavior and in the hope that it would cue it in the future. (It was not a discriminative stimulus as it was present on the board at all times.) The rules were made more simple as well. "Sit like Spider-Man: on your bottom, hands in your laps and lips closed."

Thus the components of the treatment package were: positive reinforcement of appropriate behavior, modelling, instruction, cueing and positive practice to increase appropriate behavior. The consequences were available to groups rather than individuals.

### Phase III: Change to individual contingencies

On October 24th, perusal of the data indicated that

only a few children remained highly disruptive. Because it seemed unfair to deny a reward to several children because of the behavior of only a few, the teacher and worker agreed that it would be more appropriate to provide consequences on an individual basis to these children. The group was simply observed and at the end of a one minute interval, the disruptive children were noted. At the end of group time it was announced which children could not take part in the rewarding activity. Teams were no longer used. After the teacher provided the reward the children who had not succeeded were provided with instructions, modelling and practise. In addition, those children who were having difficulty were reminded to sit like Spider-Man before the group time began. Observations were made whenever there was "group" time.

This program remained in effect until October 31st, when the program was interrupted as contingencies were removed for Halloween. The following day it was decided that the teacher could control the contingencies.

On November 2nd, to all intents and purposes, the program was discontinued.

#### Recording of Progress

Intervention began on October 10th and several methods of recording progress were used.

1. From 9:00-9:30 the total number of disruptive children at the end of a 3 minute interval was recorded.

2. From 11:00-11:30 the observation code (Code A, Revision I, Appendix 3) was used. Initially all the children were monitored, but later only those who exhibited high rates of disruption were observed (Medland & Stachnik, 1972). This data was taken by regular observers who were aware of the program and spot checks for reliability were made.

3. On October 24th, we ceased recording the number of disruptive children and recorded instead whether any disruption had occurred during a one minute interval (Harris & Sherman, 1973) (Code C, Revision I, Appendix 3).

4. The writer also kept a record of which teams won the Good Behavior Game and how many points each had accumulated.

5. When the contingencies were discontinued we returned to record the total number of disruptive children at the end of each interval on two occasions. On these probes there was no reliability check.

#### Evaluation of Outcome

Figure 2 (page 112) represents the total number of disruptive children per interval for three points during the intervention and two dates after the program ended. It indicates that the targeted behaviors lessened after the intervention.

Data extrapolated from Code C (Appendix 3) is presented in Table 3 (page 113). After baseline there was one

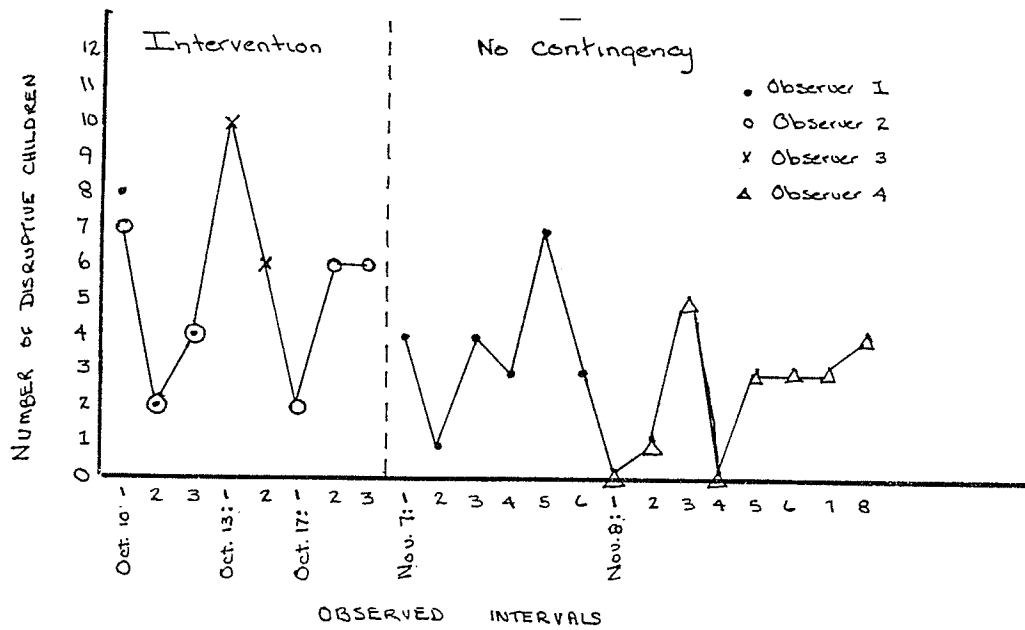


FIG. 2. Total number of disruptive children at the end of each interval. Based on Code C, and Code C, Revision I (Appendix 3).

TABLE 3

Average Number of Disruptive Episodes  
Per Interval For Each Child -  
Based on Code A and  
Code A, Revision I  
(Appendix 3)

Child	Trial Date											
	Sept. 26 28		29	Oct. 2 4		6	6a *10	10a *24	24a *31			
A	0	0	0	2	0	0	0	0	0	-	-	-
B	0	0	0	.5	1	0	0	0	0	-	-	-
C	0	0	0	0	0	0	0	0	0	-	-	-
D	2	0	4	0	2	1	0	0	0	-	-	.33
E	.5	.5	0	1	0	0	0	-	-	-	-	-
F	0	0	0	1	1	0	0	0	0	-	-	-
G	.5	1	.5	0	4	2	1.5	0	0	-	-	-
H	0	.5	2	1.5	0	-	-	-	-	0	0	-
I	0	0	2	1	1	.5	.5	-	-	-	-	0
J	0	0	0	0	0	-	-	-	-	0	0	.33
K	0	.5	2.5	.5	1	0	0	0	0	-	-	0
L	0	.5	4	2.5	4	-	-	-	-	1	1	.33
M	0	0	1	2.5	1	.5	1	0	0	-	-	-
N	0	0	2	0	1	0	0	-	-	-	-	-
O	0	0	.5	0	1	.5	.5	0	0	-	-	0
P	3	0	.5	0	1	0	.5	-	-	0	0	.33
Q	0	0	.5	0	0	-	-	-	-	-	-	-
R	0	1	0	.5	2	-	-	-	-	-	-	-
S	0	.5	2	0	2	0	0	1	1	1	0	.33
T	0	2	0	0	0	0	0	0	0	-	-	-
U	0	2.5	0	0	0	.5	.5	0	0	-	-	-
V	.5	.5	2.5	0	0	0	0	0	1	-	-	-
W	0	.5	2.5	0	0	0	0	0	0	-	-	-

Note.--"a" indicates data from second observer

\* indicates change in contingencies:  
September 26-October 6 = baseline;  
October 10 = group contingency;  
October 24 = individual contingency;  
October 31 = no contingency.

day in which the number of disruptions per interval was calculated for all the children...October 10th. This indicates that disruption had decreased when the Good Behavior Game was introduced. After that the nine children whom the worker and the teacher agreed were among the most disruptive and the most unresponsive to correction were monitored. This indicates that these children were less disruptive. One day of observation, when the contingencies were not in force (October 31st) shows a very slight increase in disruption among the target children. Reliability was high between observers (91-95%).

Figures 3 and 4 (page 115) describe the results of monitoring the success of the teams and individual children during the Good Behavior Game. This indicated that as the game progressed the teams were having less rather than more success, particularly the green cats. The orange cats started out well, had a bad day from which they recovered, then went into a slight slump.

Figure 4 indicates that the vast majority of the children were rewarded. Of six days, three were without disruptive behaviors during group time. No conclusions can be drawn from this data as there is no comparable baseline data. Again, subjective reports from the teacher and observer indicated that there was further improvement in class behavior during group time.

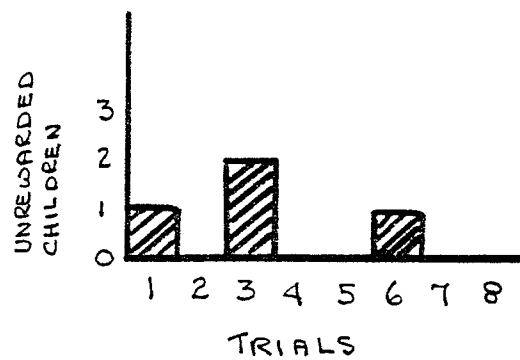


FIG. 3. Number of children not rewarded - individual contingencies in effect.

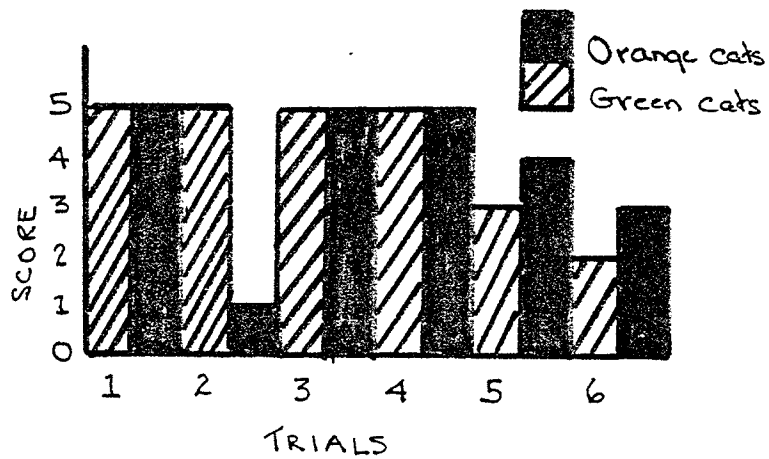


FIG. 4. Team scores in "Good Behavior Game".

While it is certainly not possible to make any statement from the data about the effectiveness of the intervention, it is interesting to note that the teacher discontinued the program because she felt that the behavior of the children during group time had improved greatly and that she indeed did have the attention of the majority of the children for the majority of the time. In that very limited sense, perhaps the goal had been approached if not attained.

#### Discussion

It will be evident that this part of the practicum is more valuable for the lessons it provided in what "not" to do than in how to successfully use behavior modification in a classroom. It is helpful to detail the difficulties encountered.

#### Subject characteristics

In the first place the literature on the use of group contingencies arises from intervention with older children (Harris & Sherman, 1973; Medland & Stachnik, 1972; Wolf et al., 1970). It seems that five year olds lack some of the behaviors which allow them to participate in a team game, despite an attempt to compensate for the lack of number comprehension. The children had no ability to reinforce team members for appropriate behavior. More important was the fact that some of them did not have the colour

comprehension needed to discriminate members of their own team! The English comprehension of several of the children may have been over estimated. Finally their ability to tolerate delay between success and reward was also over-estimated.

#### Decision to intervene

In view of the age of the subjects, one might rightfully question whether we were too hasty in trying the Good Behavior Game. Perhaps one month is too short a time to allow children to accommodate to new surroundings. The indication from data in Table 3 is that the number of disruptive episodes was declining before the intervention began.

The decision to go ahead was made in light of the teacher's sense of futility and the worker's enthusiasm to try a technique which in the literature at least looked fairly straightforward and promising. This was combined with a lack of experience in heeding the differences in the subject groups and so knowing when not to proceed.

#### The role of stimulus control

One also wonders about the role of stimulus control in the intervention. This was not carefully determined at the outset. The teacher's asking the children to sit down and listen was probably not sufficient to evoke the behaviors which were expected. This was strengthened when rules were

stated clearly at the beginning of each session but there were times when the rules remained unspoken. The introduction of the Spider-Man cue helped but again there were times when he was not drawn to the children's attention at the beginning of the group.

#### Rewards

This was the part of the program in which I was most immediately aware of violating basic principles. While there was some variety available and while the children had sampled most of the activities they chose as rewards, there were always some members of the rewarded team who did not enjoy their prize or who found it aversive. For example, one child clearly detested going to the gym, the activity which was most frequently chosen. Similarly, there were some children who never were rewarded and who could not have cared less. This will continue to be a problem in using group contingencies unless several rewards may be chosen simultaneously by different children.

Furthermore, the nature of the reward was not consistently made known to the children, so they did not know whether behaving was worthwhile or not. This was corrected on October 23rd and during the individual phase the children did know what was at stake.

Another difficulty arose when the reward was not available immediately after the group time. Not only did the winning group have to wait until the gym was available, on

some occasions they had to wait such a long time for the teacher to prepare the equipment that the unrewarded group arrived before the winners had had a chance to play. This difficulty was exacerbated by the fact that the winners were required to sit quietly on the circle until the equipment was ready. There was an attempt to develop other reinforcers, but the majority of the children continued to choose gym time. Although the subversive effect of the winners having to sit quietly was mentioned to the teacher, she was unwilling to allow the children to run at will while she was getting ready. Smaller, more frequent rewards such as pushing the teacher around the room on a chair after five minutes of good behavior would be used as rewards in another program.

Finally, the persistent disruption of a few children eliminated the chances for their group to win. Rather than eliminate them from the game, it was decided to try to use individual rewards

#### Assessment

The decision to record the number of disruptions in a 20 second interval did provide information on the general disruptiveness of the class and also on which children were more troublesome. It seemed that this was more informative than Harris and Sherman's (1973) approach of recording only whether disruption had occurred. Similarly, Medland and Stachnik's (1972) method does not

capture the number of disruptions in a series. The teacher and writer thought that the child who emitted several disruptions in sequence was more of a problem than the child who made one disruptive act. Therefore it seemed important to capture that aspect of the disturbance.

#### Recording of progress

It will be evident to the reader that my lack of experience in this area resulted in an attempt to sample several codes and methods. It would have been better to have chosen one method and stayed with this. For example, if Harris and Sherman (1973) had been followed through all the phases, statements about the effectiveness of the intervention could be made.

If data had been collected on the total number of disruptive children during assessment as well as in the intervention and follow up phases, comparisons might have been drawn. Similarly, if the goal had been defined as a certain length of time which was free from disruption, or a certain number of children who were not disruptive, one or two methods could have been used through all phases. The lack of clearly defined behavioral goals reflect in part my fear of failing to attain them. In light of the confounding effects which result from the failure to provide adequate definitions, this failure was ensured when the lack of clear goals resulted in inconsistent data. The failure to record behavior according to one standard (e.g. the number of

disruptive episodes per interval or number of disruptive children per interval) across all phases of the program, including baseline and post intervention, makes it impossible to evaluate effectiveness. The only evidence which can be presented is extremely tentative and highly subjective. Similarly, the fact that disruption was on the decline from September 29th to October 6th calls into question whether the behaviors were improving on their own. Perhaps no intervention would have been better strategy.

While there is no experimental evidence, then, to indicate that the Good Behavior Game or the switch to individual rewards resulted in a reduced level of disturbance during group time in the class, the teacher and observers did find a great difference in the classroom after three weeks of intervention. The teacher felt that the level of confusion was reduced to a point where she could teach most of the children most of the time. She also commented that she had found it a little easier to see and praise good behavior and that she had learned the importance of being very specific about the behaviors she requested from the children. She had seen that the children were not "turned off" when I denied them rewards, so the teacher thought it would be easier for her to consequence behavior accurately. In that area, at least some gains had been made.

Nevertheless, I would be hesitant to use the Good

Behavior Game again with such young children in a regular class. In the first place, the children would have to be trained to work in teams and would have to possess prior skills which would have to be trained. Usually when a class is large and disruptive the time to lay the groundwork is not available. The other difficulties I experienced could be overcome with more experience and better planning. On the whole, for five year olds a method which allows quick access to small rewards for the children who are highly disruptive is a more appropriate change strategy.

CHAPTER IV: CHANGING THE BEHAVIORS OF  
THREE CONDUCT DISORDERED CHILDREN;  
SPECIFIC APPROACHES USED  
IN THIS PRACTICUM

The literature review provided an overview of the many approaches to altering the disruptive classroom behavior of individual children. This chapter details the procedures selected for use in this particular practicum and presents them more explicitly than was done in the earlier chapter. It also addresses more specifically one of the behaviors which is part of a "conduct disorder" concept. The problem of deciding whether intervention was necessary is also considered.

A Consideration of Non-Compliance:  
The Hallmark of the Conduct  
Disordered Child

One of the specific behaviors of conduct disordered children is non-compliance. It permeated the actions of all three children to such an extent that it merits discussion here.

Definition and description

The terminology with regard to "non-compliant" children is often confusing. Patterson (1974, 1976) calls his subjects "aggressive" and includes non-compliance as

one component of aggression, seeming to use "aggressive" and "coercive" synonymously. Herbert (1978) links non-compliance with aggression saying

The display of seriously disobedient (non-compliant) behavior is often accompanied by a display of temper tantrums and aggression. The oppositional child, if coerced by parent or teacher often turns on a breathtaking display of hostility, which in turn is highly coercive (p.128-9).  
Italics added.

In the face of this semantic maze, it seemed necessary to choose one word and use it consistently--non compliance seemed most apt.

Herbert (1978) goes on to describe a non-compliant child as one with a relatively broad and general tendency to refuse to comply with requests, or actually do the opposite of what was requested. This is not to be confused with "the refusal to comply with a few specific requests, which after all might be a legitimate act of asserting personal integrity" (p.128). The question of "how much" refusal is "too much" became an issue which needed clarification in work with two mothers who had much higher tolerance for (or resignation about) their children's non compliance. Disobedient behavior is often accompanied by temper tantrums and aggression when the child is coerced into behaving. The problem of coercion is two-sided...the adult may try to coerce the child into behaving, and/or the child may try to coerce the parents

or peers into giving into his requests. Either situation involves the use of aversive stimuli and can be used to take something away from someone or to avoid doing something.

#### Causation

Non compliance may be seen as the child's attempt to control the sources of reinforcement in his world in the best way that he knows. The tendency to search for pleasure and avoid pain may or may not be innate, but I support the view that a child's coercive behavior is learned from a very early age. Patterson (1976) argues that babies cry in order to train their parents to attend to vital care-taking activities. (This is, of course, negative reinforcement for the parents, as feeding the child generally removes the aversive stimulus...crying.) (There is anecdotal evidence that in some native American cultures, the crying of infants does not hasten parents to attend to the child's needs and in fact the children of these cultures rarely cry and are commonly referred to as stoic. It would be interesting to measure their rates of non compliance. Their attempt at coercion through negative reinforcement is extinguished and other sources of reward must be sought.) As the child grows and...

presumably, as one member of a system applies pain control techniques, the victim will eventually learn, via modelling and/or reinforcing contingencies to initiate

coercive interchanges. As victims acquire coercive skills they will also be more likely to counter the coercive initiations of others by coercive measures of their own. (Patterson, 1976, p.269).

A non compliant child is one who has learned to use aversive stimuli as a means of satisfying his needs. Most children seem, with age, to acquire other, less unpleasant skills for the same ends. The failure to learn more adaptive responses in lieu of the primitive coercive behaviors may be the result of:

1. The parent's failure to teach alternate behaviors.
2. Positively reinforcing (with rich schedules) coercive behaviors.
3. Allowing siblings to increase the frequency of aversive stimuli which are stopped when the child uses coercion (e.g. hitting by a smaller sibling may be encouraged by parents, but always terminated when a bigger child hits back, harder).
4. Punishing coercive behaviors inconsistently, or using weak conditioned punishers as consequences for them (e.g. denial of a privilege the child isn't especially interested in, like going to church).
5. Modelling--in the home, nursery school, on the streets or on the media.

The role or parental schedules of reinforcement in "teaching" a child to use coercion has not been fully researched. Neither have the effects of modelling of this

behavior been specifically investigated. The work of Bandura would suggest that parents do act as models for their children and there is no obvious reason that coercive behavior should be exempt from modelling. If one may equate coercion with aggression, then Bandura's (1973) work is directly relevant.

Not only is the non compliant child a master at exercising coercive skills, Patterson finds him to be "retarded" (1976, p.289) in using basic social skills...he may not know how to join a group of peers, how to play cooperatively, how to complement peers or adults, or how to carry on a conversation.

#### Incidence

It is not surprising that normative data (Patterson, 1976) showed coercive behavior ranged from .02 to .50 responses per minute in a day care situation with normal children.

First, children learn to counter the coercive behavior and then to instigate it. Having learned these skills, children perform them at varying rates, which usually decrease as the child gets older. Patterson suggests that children who are referred to his agency are as coercive as the average three to four year old (.820 coercive responses/minute for the three's and .670 for the four's.) (The rate is .397 for five's, which sheds some light on the question of how much is too much.) But these data are only based

on Patterson's work and must be taken with caution. It is suggested that for some children, with increasing age, non compliance becomes increasingly unacceptable and is punished more severely and consistently.

An earlier study by Patterson (1974) suggests that most of the components of coercive behavior (command negative, cry, disapproval, dependency, destructive, high rate, humiliation, ignore, non comply, negativism, physical negative, tease, whine, and yell) are present in two and three year olds, but by four there are reductions in the rates of command negative, destructive and humiliate. By the age of five, negativism, non comply and physical negative had dropped in rate. Patterson argues that "the changes in frequency patterns by age suggests the possibility that older children might display a progression in performance which reflects these developmental sequences". Those coercive behaviors which developmentally were dropped first might occur in the lowest rates in the older child. The responses dropped later would occur at higher rates. Thus children who display a low response rate will display all the higher responses as well. This is in keeping with Graziano's (1974) findings with autistic children, that once a high response behavior was dropped, another appeared to take its place, and that the newcomer had been a part of the child's repertoire at an earlier stage. (It also may, in part, explain the Symptom Substitution phenomenon

which has long plagued workers in all theoretical camps.)

In sum, then, a non-compliant child is one who uses a number of behaviors which are unpleasant in order to obtain reinforcements of varying kinds. These behaviors occur more frequently in non-compliant children than in children who are not aggressive. It is assumed here that non-compliant behavior was learned in the past and is maintained currently through positive and negative reinforcement experiences and through modelling. Biological predisposition may play a part in the acquisition of these skills. It is the task of the worker to determine what these past experiences have been, what contemporary events are maintaining the behavior, whether there are constitutional or ethical impediments to treatment, and finally to provide a plan which allows the child to learn alternate and more appropriate behaviors which will replace the old, aversive responses.

#### Treatment Approaches Used In This Practicum

##### Decision to intervene

Conduct disordered children are characterized as behaving in ways which have unfavourable consequences, particularly in terms of frequency, intensity, duration and developmental appropriateness. The unfavourable consequences may accrue to the child--"affecting his ability to learn, to enjoy life in general" (Herbert, 1978, p.17),

or to others. The children's behavior also tends to deviate from widely accepted social standards. The concept of "conduct disorder" is vague at best, relying on judgments about "norms" which may not be scientifically determined; about "unfavourable consequences" and above all, about the appropriateness of the behavior given the situation facing the child. This makes the decision to intervene highly judgemental.

The reality of the situation is that, in the absence of normative data teachers and social workers do make decisions about the children they work with. These are generally based on observation of the child in the classroom and comparison of that child's behavior with that of his peers. (The worker was fortunate to be in classrooms where the teachers had established a pleasant atmosphere through providing interesting activities, firmly established limits, and considerable room for pursuing individual interests. In addition, they were knowledgeable about child development and were tolerant of individual idiosyncracies. Had this not been the case, the practicum would have focused much more on changing the environment than on the children. It will become apparent that even in such a pleasant class, changes were made in the teacher's handling of the child.) Judgements about intervention are not made in isolation, but are certainly subjective. It was not the purpose of the practicum to rigourously subject

children to testing to establish "wide deviance from social standards". The children were chosen because they were more likely than other children to refuse to do as they were asked, or to be aggressive and disruptive. It should be noted that the refusal was adamant. The children could not be encouraged, cajoled, enticed or threatened into changing their minds. This in turn, resulted in the teacher often asking them to sit in a chair away from the group, or issuing a great many instructions. Other children appeared to hold these children in awe. Because of their non compliance, peers feared their aggressiveness and so avoided any close contact.

In fact, the consequences of their behavior were unfavourable in the following ways:

1. The teacher's contact with them was generally a struggle-of-wills, unpleasant for both the child and the teacher.
2. Other children avoided intimate contacts and often rejected their approaches, thus creating a cycle of approach— rejection— aggression.
3. The child was frequently left to do as he pleased, in isolation. While this may have been immediately satisfying for him/her, the long term chances of his "learning appropriate academic skills" were not good. This was particularly true for the children who did not enjoy cutting, pasting, colouring, listening, waiting their turn, or sitting in a group.

4. When a child was very disruptive, the entire routine of the class would be disturbed, a consequence which, in the long run, was detrimental to all the children.

It was felt that these consequences were sufficiently deterrent to the children that some effort should be made to change their behavior.

### Subjects

Three children were identified as conduct disordered--two boys (W. and R.) in Class B and a girl (A.) in Class A. One boy, (R), was Native, one Metis (W.), and the girl was a white Canadian. They were all 5 years old at the time I started to work with them, and 6 years old when I finished.

### Assessment

While the identification of the subjects was judgemental, in a behavioral approach judgements are based on observable behaviors, plus considerations of physical condition and current thoughts and feelings. (The latter being the traditional social worker's main concern.)

The assessment of each child included seven phases.

1. Discussion with the teachers about which children they thought were unusually aggressive, non compliant, disruptive or active. This resulted in identification of a few possible subjects.

2. I observed and made detailed notes trying to isolate some critical stimuli and rewards which might account for

the behaviors of concern.

3. These were then formalized into a partial interval time sampling code which allowed the observer to record 6 stimulus events and six or seven subject responses, as well as the teacher's response to the behavior. More than one response and/or stimulus could be recorded during each interval, behaviors being sequentially numbered. Whole interval sampling would not have captured this aspect of the behavior. The observers recorded 30 seconds and rested 15 seconds when using these codes (Codes B and D, Appendix 3). These were social work students (three during first term, two during second term), who came to the class one morning a week or one morning every two weeks.

4. These observers were trained in the use of the codes and their reliability was monitored either by observing with them on occasion or by having two of them take data simultaneously. Throughout the practicum, reliability remained over 80% and was as high as 99% on one occasion. Observer drift was not a problem. Observers were asked to work independently and found they could accurately record data by using a wall clock. They remained as unobtrusive as possible, but because of the limited visibility, often had to move to keep the subjects in view. Certainly the problem of subject reactivity as a threat to validity may be present here. (Only on one occasion did a child ask whether he was being observed.) As a precaution, observers

took data on peers, hoping to obscure the primary focus of the observation.

5. In order to gain experience in using other codes, the worker introduced Code E (Appendix 3) for A and Code A, Revision I (Appendix 3) for R and W. Code E is from Kent, O'Leary and Broderick's "A manual of intervention strategies in the school; rationale, assessment and procedures", (undated). This is a partial interval time sample method (30 sec.) which allows recording of the child's appropriate behaviors and the teacher's response, in terms of its positiveness (pleasantness) or negativeness. It was used when I decided I needed to be more concerned with the general tenor of the child's behavior, rather than the specific behavior per se.

Code A, Revision I (Appendix 3) was used to compare the amount of disruptive behavior performed by the subjects and other selected peers. One child was observed for 30 seconds and a mark was made if he was disruptive. The observer rested 15 seconds and then observed the next child. This code was also used during the intervention. Observations were made at the same time each day as much as the kindergarten schedule permitted.

6. Each child's parents were interviewed in order to find out more about the child's history, behavior in the home, and health. The interview also allowed the worker to explain the proposed intervention and to obtain formal, but unwritten permission to proceed. In each case, the

worker offered to provide a written contract, but the parents refused.

7. Inasmuch as it can be said that any child of five is interviewed, I spoke with the children to try to understand their view of what was going on in school, how they felt about school, and whether they would like to change things. The program was also explained to them.

Once the assessment was complete, the goals of the treatment were specified, discussed with the child, the parents, and the teacher, and a treatment program was designed.

#### Treatment

Treatment primarily consisted of using operant techniques to accelerate desirable activities, eliminate maladaptive responding and maintain the therapeutic gains. For one child it was necessary to establish effective behavior. Some cognitive approaches and relationship building techniques were also employed.

#### Operant procedures

Rewards. Work with each of the three children involved the use of a report card, which the child designed. The card was divided into time intervals, and if the child's behavior was appropriate for the duration of an interval, a star was placed in that interval. If the child received an agreed upon number of stars during the morning, he could choose a reward.

I monitored the behavior in the early stages of the program, and provided the rewards. Basically, then, the intervention was a very simplistic token economy in which individually defined incompatible behaviors were reinforced immediately with stars and later exchanged for back up rewards. In addition, the worker and the teacher provided ample praise in the form of smiles and comments for appropriate behavior.

In order to establish powerful rewards, the children were asked to select items from a reinforcer menu containing pictures of things which were available in the classroom. However, time outside the class was a much more powerful incentive for all the children and outside activities were added to the list. While reading stories, playing with the tape recorder and blowing bubbles were chosen, far and away the most popular reward was to choose a friend to play outside the classroom with the Adventure People, a collection of small moveable people with a jeep, an all-terrain vehicle, some sleeping bags and several boats. This was chosen so often that the worker worried about satiation. The addition of a new piece of equipment and the temporary absence of an old piece prevented this.

While a playroom containing other toys was accessible on occasion, the children generally preferred to play in an alcove off the main hall, a space about 8' x 4', poorly lit and (by my standards) uncomfortable, but having access

to a dark and dusty area under the stairs. It also provided hand holds from which one could swing and play Spider-Man. On occasion, we went into the playground to throw snowballs or play hockey. The time spent in the rewarding activity varied from 15 minutes to 5 minutes as the program was being faded out.

"Time out". There were some behaviors which could not be tolerated...for example, intense hitting and failure to remain with the class as it moved from area to area in the school. These were dealt with by time out (withdrawing all reinforcement from the child for a short time). Since it appeared that the attention gained from adults and students was reinforcing for these children, they were sent to the cloakroom until they were ready to come in and behave. This is a very loose application of exclusion time out in that no specific time limits were elucidated and the child was not completely devoid of attention from passers by. In addition, he could see what he was missing through the one way mirror, which may have provided an incentive to return or remain, depending on how much the child valued the activity. This of course, makes it difficult to say whether the time out was really "seclusion" or more in the nature of "exclusion" in which the child is removed to another part of the room and is not required to watch the appropriate behavior of others (Gast and Nelson, 1977). The fact that the child had access to the main hall from

the time out area, also presented problems.

Before a child was placed in time out, she was warned that the punishment would occur if her behavior continued. If that did not stop the behavior the child was told again why she was being asked to leave. Generally a verbal direction was sufficient, but on one occasion, the child had to be removed physically. At the time the child entered time out, she was told that she could return when she was ready to behave in a specified manner. If the child returned and again engaged in the prohibited behavior, she was sent back. If the behavior was acceptable, she was praised.

Later in the year the cloakroom was used by the English Second Language teacher and it was not available for time out. After that time, exclusion time out was used exclusively...the child was asked to sit on a chair away from the activity. If he persisted in kibbutzing with the class, he was asked to turn the chair around.

"Extinction." The teacher was also instructed to ignore some behaviors which were being maintained by attention from herself or classmates. These behaviors were of course, carefully selected since ignoring generally results in escalation of the behavior initially and this escalation must be tolerable. The use of extinction will be more apparent in R's case report.

Miscellaneous procedures. Throughout the practicum opportunities were provided for the children to learn, through shaping when necessary, and practise new ways of behaving.

Establishing stimulus control

While the emphasis on school intervention has been on altering the consequences of behavior, techniques which establish stimulus discrimination are also useful. Often the children would arrive at school angry or upset about something that had occurred at home or on the way to school. It was useful to take the child aside and make it clear that he was now in school and that while certain ways of behaving might be tolerated in other settings, they were not tolerated in school. Being in school became a discriminative stimulus for appropriate behavior.

The report card itself, and my physical proximity became discriminative stimuli for the child to discontinue obnoxious behavior. The other children soon provided helpful clues to the subjects. "Mrs. Hudson has the cards, W." Since rewards were usually not available until 11:00 a.m., the clock hands reaching that time was also a discriminative stimulus for going to the Adventure People.

Cognitive methods

While no formal system of altering the children's thoughts and feelings was used, much of the verbal interaction was aimed specifically at changing their expectations and assumptions about their world. They needed help

to clearly identify the appropriate targets for their anger, and in fact it was often necessary to teach them to name the feeling they were experiencing. Having put a name to it, we then proceeded to talk about how to recognize the beginnings of the feelings and to deal with the anger in its early stages before it exploded.

### Relationship building

Herbert and O'Driscoll (1976) review positions taken by behaviorists which emphasize the crucial role of a caring and accepting relationship in achieving change. This is a welcome emphasis and one which is generally not made explicit in the literature reviewed. This may be a function of the experimental emphasis of the papers but it is a tragic oversight when it is not specifically mentioned in clinical work. The work of Truax and Carkhuff (1967) is so well known in social work schools that it does not need reiterating here. Suffice to say that the intervention could not have happened if the children had perceived the worker as an uncaring, cold or punitive person. In fact, the effort to communicate concern and respect for the client's parent's rights to make treatment decisions was one of the largest problems encountered in working with two of the children.

### Maintenance of behavior change

One child moved out of the area before the treatment

phase was ended, so there was concern with maintenance for the two boys only. The two methods used were: transferring control from the token economy to the natural environment through the elimination of the card and requesting the teacher to tell the worker whether the child's behavior had been appropriate; and the thinning of the reward schedule from continuous to intermittent. Because class rewards could not be eliminated completely, it was arranged to have them delivered intermittently by the helper.

Time was also spent planning for the children's placement with a grade one teacher who could manage their behavior. Finally, the teacher arranged to communicate the child's continuing behavior to the parents and the parents agreed to intermittently reward the child's efforts at control in school.

#### Recording of progress

Although some recording methods were unique to each child (as indeed there were variations on each of the previously mentioned treatment methods to fit the needs of each unique child), there was a general approach. Variations will be explicated in the case histories. Throughout the intervention the number of intervals in which the children received stars were recorded. These were supplemented by data from the observers which was analysed in terms of appropriate or inappropriate behavior. In

addition, a log of the practicum was kept, in which changes in the child's behavior were commented on and possible causes speculated. These methods allowed the worker to assess and reassess the effectiveness of the intervention and to make necessary changes.

#### Evaluation of outcome

For each of the children, specific goals were established, and data collected from the observers and from the reports were examined to see whether goals were reached. In addition, there was constant communication with the teacher about whether the child was becoming easier to manage.

It is not possible to attribute any change to the intervention. Despite a "weak" multiple baseline design across subjects, report card baseline data was not obtained, and the studies lacked a stable baseline prior to intervention. The failure to include a reversal phase also weakens the ability to attribute change to intervention. However, this was not a research practicum and the main interest was in whether there were identifiable changes in the observed target behaviors of the children. As was mentioned in the literature review, it would have been preferable to have had strong experimental evidence of change, but this was not possible. If one accepts the social work task as a

genuinely humanely motivated attempt to assist people to cope with the troubles and crises of everyday life in a way which does not diminish their worth and dignity as human beings (Herbert and O'Driscoll, 1976, p.2),

with its emphasis on the unique needs of each client, then the difficulty of undertaking intervention which is exactly the same for each client becomes apparent. This belief in itself would seem to preclude a rigorous adherence to principles of valid research design within the confines of a practicum such as this. It is especially difficult when the subjects are of different racial backgrounds and the parents are anxious that those cultural values remain in place. This was particularly evident throughout work with R.

Evaluation then is limited to evidence that the target behaviors occurred less frequently at the end of the practicum than at the outset. This evidence comes from report cards, observer data, log notes, and in one case, tapes. However, it is not possible to attribute change solely to the intervention.

## CHAPTER V: "A"; NON-COMPLIANCE

### PERSONIFIED

#### Background

A is a rather tall five year old girl. The mother, who separated from the father when A was 2, said that A's physical development and mental history were unremarkable. One wonders, however, about psychological scars. A remembers fights between her parents which ended with the arrival of the police and says that "mommy sent daddy away because he drank all the time and didn't love us." At two and a half, A was sent to a very structured (mother's description) nursery school while the mother continued to work. Last summer, A was moved to day care where her mother works and two months later entered kindergarten, going there from day care in the morning and returning to the day care until 5:30. The mother had little support from her large extended family at the initial contact, but this changed over the two months the worker was involved with A. At the end of December, the mother moved in with maternal grandparents. A moved to the school near their home and treatment was discontinued.

## Assessment

## Observation procedures

Informal--by teacher, worker and observers

The teacher and worker both noticed that at times A was dominating a girl much smaller, to the extent that the "victim" avoided A whenever possible. While playing a game with A, the worker found her to be very unpleasant. She spent the entire time issuing commands to children whom she would not allow to play. Typically, she would order a watcher to hand her a piece of equipment, then say "Not that one, dummy", although it was what she had asked for. When the worker got the same treatment and protested, A's body tensed; she kicked and loudly argued that the worker was wrong and dumb, and that she, A, had been wronged. This went on for the half hour that the game lasted. It seemed that the only satisfaction A received was from manipulating the worker to meet A's constantly changing whims.

At this point the observers were asked to watch A and make narrative recordings of her behavior and interaction with others. These were added to the worker's own narrative to produce the following information.

A began to refuse to remain in the classroom. She wandered out into the hall looking for the nurse and claiming that she was ill. This provided her with considerable attention. When in the room she remained aloof from group activities, only joining two friends from day care until an

argument occurred. She might then leave or be left. Sometimes though, no one withdrew from these arguments... they flared up and died down cyclically.

The teacher was asked to call A's mother and ask if there had been any change at home that would account for the changes in A and her reluctance to be in the class. (The teacher was very reluctant to make this call as she thought A's reticence reflected on her competence. We role played this situation and the teacher tried several times, unsuccessfully to reach the mother who had no telephone at home, and whose work number did not answer.)

Next, A began to play only with one child who constantly obeyed her. She was noted to participate well when the teacher was in the group with them and that when the teacher left, A assumed that role. When other children were in the vicinity A continued her bossy ways...on one occasion she stole a cookie. When the owner demanded it back, A declared it had been hers, ate a bite, smashed the rest into crumbs and then demanded that the owner clean up the mess he had made. Observation notes for the first week of November indicate also that as A approached groups of children they either ignored her or physically closed the spaces between each other so she could not move in. She responded to this by walking away, or trying to command attention by exaggerated behavior or loud uncomplimentary comments about the other children's work.

On November 6th and 9th, A refused to come into the classroom at all. She was told that she had to come in and that she had a choice of coming or being carried. She bargained for position in the hall ("me first") and she eventually walked in being hazed like a cow. She whined at me constantly, "Get back"... "You're too close"... "Don't follow me." When she got into the classroom, she threw another child's picture on the floor and marched out to the nurse. When she came back to class, she lay on a mat in the corner until group time was over and free play began. She wandered from group to group but not one child acknowledged her. Finally she attached herself to the teacher and whiningly asked her to help with various activities, which the teacher did. The same pattern was repeated on November 13th. Since the mother had not responded to messages left for her, but as parent interviews were on the Friday, a note was sent home asking the mother to be sure to make an appointment as the teacher was quite concerned about A's apparent unhappiness at school.

The next day the worker reached the mother and an appointment was made. The mother was amazed that we had any concerns as A had not expressed any unhappiness at home.

The following day, A exhibited polite and quiet behavior to adults, and she helped another non English child with a word book. These were the first positive behaviors we had seen in two weeks except for her consistently shown

ability to perform appropriately in situations where she was allowed to be the boss. Her behavior continued essentially unchanged until November 17th, when the mother came in and gave permission for treatment, thus ending the initial phase of assessment.

The observers summarized A's behavior as follows. A's approaches to other children usually resulted in an argument in which she demanded that they do as she asked or, more frequently in their ignoring her until she imposed herself on them. These exchanges resulted in the other children either matching A in "put downs" and insults or their escaping the situation. Occasionally, if ignored long enough, A would herself withdraw or, if insulted she would hit. Interactions with adults took two forms. When asked to do something she enjoyed, she would usually comply cheerfully, but if she didn't want to do what was requested she would either whine and say she was sick or ignore the request and wander off to another part of the room, where she would either be ignored, or attended to, depending on who was in the room (adult) and what else was happening.

#### Formal, coded observation

Information from these narratives was used to create Code D (Appendix 3) and Code E was used later in the treatment as well.

### Interviews with the mother

This lady was seen at the school and asked for consent to treatment for A. It was important to specifically identify some of the behaviors A practised at home as well as to inquire about how her mother handled discipline. The worker's inexperience in this type of specific interview was apparent in the paucity of precise information which was elicited. Mrs. G. stated that she felt since A has no father she is responsible to make A happy. She nearly always gives in to what is asked, although first she may try to refuse it. In reviewing a day in A's life, her mother commented that mornings were always difficult and ended with her yelling at A and doing things for her so they would not be late. Similarly, the time A was picked up at the day care was a rush when the mother did as A demanded in order to hurry her home for supper. Mrs. G. does not spank her daughter, but punishes her by sending her to her room. A leaves her room when she is ready to come out and behave...it is A's decision. When she is angry at her mom, she usually retires to her room on her own initiative to punish the mother. There are no children for A to play with where she lives.

A second interview revealed that Mrs. G. was in the process of obtaining an abortion and had been duly pre-occupied and short-tempered with A. Her boyfriend had been spending a great deal of time at her apartment and Mrs. G. said that A disliked him intensely and would not do anything

he asked. He told Mrs. G. that she lets A walk all over her, but she has forbidden him to have any part in disciplining A. Whenever he was there, A constantly interrupted them and demanded attention, by refusing to stay in her room. Finally Mrs. G. would lie with her until she was asleep.

Mrs. G. said that A liked being read to, having her mother share cosmetics with her, and praise from adults.

#### Interview with A

A saw the problem as not wanting to come to school when she didn't feel well, but agreed that she wasn't very happy because she didn't have any friends there. This interview was mainly directed at explaining to her the nature of intervention and discovering possible rewards. She said she would enjoy leaving the class, the puppets and the possibility of getting stars on a card.

#### Interview with day care

After Mrs. G. agreed, the supervisor of the day care was interviewed. When A started to attend she was very non-compliant, bossy, demanding of attention, and she complained constantly of being ill. The day care staff ignored her hypochondria and it has disappeared. They sent A to the hall if she refused to do as asked, and she was more compliant. They give her as much individualized attention as they could manage and have told her she is not staff and

therefore cannot order children around. If she persisted, other children were urged to ignore her.

#### Behavioral Formulation

##### Deficit behaviors

1. A lacked the skills necessary for cooperative play with other children; e.g. compromise, pleasant approach-making, interest in their activities, and sensitivity to their feelings.
2. She lacked a breaking system usually imposed by the presence of adults, for example she stole a cookie from another child while I was sitting right beside her.

##### Excess behaviors

1. A responded to unhappiness by complaining of feeling ill.
2. When she did not want to participate in an activity, she whined, complained or retreated.
3. When she was near another child she commanded him to do as she asked and insulted his efforts while praising hers.
4. She often refused to comply to requests from adults or children.

##### Consequences maintaining the behaviors

It was speculated that the following contemporary events were maintaining these behaviors.

1. At home, A's non compliance was maintained on a variable interval schedule as the termination of her negativism (aversive stimulus) was a negative reinforcer for her

mother giving in to her demands.

2. At school, A did receive considerable attention from adults for her inappropriate behaviors. Her refusal to come into the room elicited immediate attention from the nurse, the teacher, the vice principal, the resource teacher, the teacher's aide and me. Her refusal to participate in group activity brought attention from the teacher, some peers and the student teachers. When she was working in proximity to another child who was ignoring her, her insults of his work and her ordering him to give her the crayons, etc. usually resulted in him paying attention to her, even though it may have been an escalation of her own miserable behavior.

Finally, because it was impossible for the teacher to carefully track A's behavior, she was accidentally reinforced for inappropriate actions.

A is at the easel painting and has done some painting, but has spent the majority of her time thrusting her paint covered hands in other people's faces and laughing mockingly. The teacher who has emerged from somewhere else sees only the painting and comments "Good job, A."  
(V.B.'s notes, November 10.)

In sum, the stimulus events which precipitated A's aversive tactics were: (a) being ignored by other children, and (b) being asked to do something she did not want to do.

She was reinforced when she received attention for her aversive behavior or when it caused others to withdraw their

requests or acquiesce to her demands.

### Treatment Program

Phase I: Increasing deficit behaviors through positive practice, modelling and reinforcement

#### Sessions I and II: (November 20-21)

The first two sessions concentrated on teaching A to say "please" and "thank you" to children and adults, and on asking instead of commanding. Two puppets were used. The "Polite Rabbit" modelled the behavior and A used the other to practise. Each time A made the desired response, the Polite Rabbit made a big fuss of praising and touching her. At the end of each session, A was rewarded by being able to choose an activity. A note was sent home commenting on A's hard work.

#### Session III: (November 23)

The first set back occurred the following session when we were unable to find anywhere to work except the library, where we were unable to use the puppets (they were too noisy) and the Cinderella book was not the version A liked. We tried coloring together but she refused my request to share her crayons. Obviously, sharing was a cumulative behavior for which the beginning steps had not been learned. We backtracked and practised alternate responses to a flat "No" such as "I'll get you the other box" or, "You can have two and I'll have the rest." We also practised "Please"

and "Thank you". A politeness card was introduced which would give A immediate reinforcement for performing "please and thank you" and asking instead of demanding in the classroom. If she got one more star than the day before, she could choose an extra reward at the end of the week. (In addition to her daily reward for practising).

Session IV: (November 24)

In the subsequent session, A chose to practise via the play telephone. She called her friend (I role played) and proposed that they hide on the teacher and put on some nail polish. When the "friend" refused, A hung up. This behavior was viewed as similar to the "no" response to the request to share. It effectively terminated all possibility of positive play in the immediate future and seemed to be A's frequent response to events she deemed aversive. We explored alternatives to hanging up and role played the conversation. Again, A hung up. However, she immediately called back to invite the worker to go to Disneyland. The danger of making extravagant promises one cannot keep was explained and we role played again. This time she invited the worker to go to the park, swimming and to Hawaii. We stopped again and went over the previous discussion. This time the worker was invited to supper, watch TV, have chips and pop and sleep over. As this was praised, she said "Your mom can pick us up at daycare" so we stopped again and practised asking "Can your mom pick us up at

day care?" The session ended with A repeating what she had practised, and her reward, blowing bubbles. At this time she tried to "con" the worker into letting her have more turns than had been agreed upon.

Phase II: Politeness card withdrawn and a more powerful model included

Sessions V and VI: (November 27, December 3)

By now I was experiencing some frustration over A's inability to transfer politeness to children. She had earned increasing numbers of checks for politeness but was only polite to adults. The politeness card was withdrawn, temporarily.

It was again suggested that the worker might be trying to train skills which were cumulative...to back down from her own needs to let others express and fulfill theirs, in order to have hers met later. In considering how children learn to delay gratification, the writer realized that "discussion of consequences" was much too abstract for five year old children who are still at the level of concrete operation--seeing is believing for a five year old. One researcher suggests (Mischel, 1978) that a mental image of the reward for delay is helpful in postponing gratification, but it seemed important first to show A that she would not lose her wish (to play with a toy in the company of a friend) by delaying it and doing what the friend wanted first. To this end, A was invited to include a friend in the next session.

Hopefully, this would also facilitate transfer politeness to children from the sessions to the classroom. (Another question had arisen. Was the friend's mother's consent for her to participate necessary? Was A's mother's consent to approach the friend's mother needed? Both were obtained.) At this point there is a three day gap in the sessions.

It was decided to use the number of minutes of cooperative play as an indication of progress. (See Figure 5 for definition of cooperative play.) The sessions were recorded and the tape replayed to time the interval of cooperation. This session we discussed alternatives to removing oneself when things didn't go your way and rehearsed them.

Phase III: Card reinstated

Sessions VII-IX: (December 4-6)

When school resumed A was displaying again her earlier behaviors of coming reluctantly and confiding that she was ill. She was ignored and eventually got a book and went to read. When the worker approached her she whined. At this point the worker walked right into the trap by telling her that when she whines, the worker didn't want to talk to her. Realizing that this was exactly what A wanted, I quickly backtracked and said I was trying to find out why A was sounding so much like Cinderella's ugly stepsisters. A replied that she was mad at me and this was discussed.

Since she now had a friend with whom she could interact

positively for short periods of time, the worker told A we would start the politeness card again and discussed what she would like as a reward if she got one more star each day. At this time she was joined by two other children who wanted a table on which to play a game, and so the worker stayed around and coached A on how to ask if she could watch and later on how to ask if she could join. Then we practised playing politely (not cheating or moving out of turn or yelling if our opponent doesn't take his turn fast enough). A got stars for each polite behavior, even if it had to be prompted or cued. This program continued until treatment ended.

In addition, her "sick" behavior was being extinguished and there was a provision that if she refused to do as she was asked, she would be sent to the hall.

This program remained in place for the three weeks during which sessions were held each school day, but the operant program aspects took a back seat to the need to deal quickly with A's apparent lack of self esteem, her perception that her father had left the family because he did not love them, and A's need to test whether I would or could hold the limits I had set. In addition, I had to deal with my own reactions to A before the relationship could flourish. Traditional social work concerns about trust, limit setting, and feelings became primarily important.

Phase IV: Control as an issue

Sessions X and XI: (December 8-13)

The next day, A refused to join the group and demanded help painting. The worker ignored her and then A made a polite request. A then said she couldn't come and work until she had finished, but she started something else. Control had become an overt issue. As I went to get the puppets, A and her friends disappeared. Finally the worker found them in the playroom with the door closed, giggling wildly. Since leaving the room without an adult is not allowed, I told them that they could not practise that day and therefore there would be no reward. The other friend who had not disappeared was given the play time instead. A was returned to her class. This was a mistake as it left the teacher to cope with A's temper... crying and screaming that she wanted her mother. The teacher replied, "You are not going to get your mother, so settle down." Eventually she settled down and went to the easel to paint. She was very stiff and controlled. It seemed that this was an ideal time to practise psychosituational intervention (Bardon, Bennett, Bruchez, & Sanderson, 1976) and we talked about what had happened and the worker encouraged her to paint a really mad picture. We thought and talked about it being okay to be mad at people, especially at me. Then she asked if she could have more marks on her politeness card, but this was refused. I agreed not to mention today's incident in the

home note to the mother.

Monday she arrived shaking with anger because her friends said they would not play with her. She accepted a suggestion that she wait a while before she got too worried and soon they joined her. She again refused to join the group and painted instead. She was ignored by the teacher and I as this is not a behavior which upsets the rest of the class or which others want to emulate. Today it seemed important to see her alone and review the behaviors for which she could earn stars, since stars had been denied on Friday. In retrospect, this seemed a very inappropriate and excessive punishment. She could receive a star for saying "please" and "thank you", sharing her books, toys and crayons with others, (this was added because she showed some ability to do this in practise sessions), and asking for things, instead of taking or grabbing things she wanted. The rewards were as before. This was too thin a schedule of reinforcement and should have been much enriched for a child who needs more than most children.

Sessions XII and XIII: (December 12-13)

Tuesday brought the crisis which had been brewing. A's mother dragged her in late, clasping her orange juice. The teacher met her and said that being late didn't matter, we were all glad she was there. The worker found her a straw for the juice and she took a few sips then placed

the drink on the outer edge of her locker, and refused to move it to the teacher's desk where it wouldn't spill. We compromised by putting it at the back edge of her locker. As she had missed the group time, she started to paint and hollered at me to help her. In deference to her trying start to the day, I complied without demanding a polite request. During the positive practise session, she commented that her mom was real mad when she was late and had dragged her all the way to school. We discussed what kids do when they are mad at their mom. A's friend runs to her dad. This elicited a great deal of information from A about her father and her feelings and memories about their time together, as well as the reasons for his leaving. She was sitting on my knee while relating this and suddenly started to scream and cry that she wanted to colour. After she had coloured we returned to the room.

I went to the adjacent kindergarten. A came over and climbed on my knee, while I finished making A a "wonder woman" crown with play dough. Others wanted one too so the worker explained the order of the waiting list but was interrupted by A who wanted a design made on hers. The worker said that two others were to be made first. A started to push their dough away and thrust hers forward. At first she was ignored and then told she would have to wait. Finally she stood up and shouted that she had said "Please" so I had to do it NOW. I explained that I knew

A found it hard to wait, but sometimes even if you say please, you have to wait your turn. A started to jump up and down, stamping her feet and shouting that she wanted it NOW. She was told to STOP it or go out into the hall. She then hit me and hollered "You can't make me." I replied that I could make her but would rather A calmed down. She hit me again and hollered "You have to do it" so A was picked up kicking and screaming and carried to the hall. I deposited her and told her to come back into the room when she was ready. She returned after ten minutes. Again, we talked about being mad, then it was time for her to catch the bus. Her card was reviewed and a note sent home to her mom saying she had had an upsetting day. She dictated a note saying "Dear mom, I have had a hard day so please don't be mad at me." This was instead of the one she originally requested to be written, "Dear mom, I was a good girl today." Even writing the note was a hassle. She wanted to write with the worker, all the while demanding that we hurry so she wouldn't be late. Then she wanted to hold the pen and write it herself. (She can't even print her name.) Then she wanted to dictate the preferred version. All this was going on while she stomped and moaned that she would miss the bus. When the note was done, I helped her dress and said I would be looking for her tomorrow.

Phase V: "A" monitors the worker

Session XIV: December 14)

Wednesday, when A arrived, the worker welcomed her and A jumped into her arms for a big snuggle. She did join the group when I took her by the hand and led her. In an attempt to cover the feeling bases as well as the behavioral aspects of helping, the worker decided to introduce some of the transactional analysis material on feelings in our practise sessions, and did this today (Freed, 1973). She used please and thank you often and appropriately and we talked about how hard it is to wait. She then went and brought a friend to join her.

At this stage the worker had consulted with Dr. Kuypers. In reviewing the intervention, it was clear that there had been some progress and that A had learned very well how to survive in her world. Dr. Kuypers pointed out that the most rewarding thing for A is to be the boss, and it is important to teach her to be the boss in an acceptable manner. This resulted in new rewards being offered to A. In the first place, the worker guessed that A was angry because the worker expected A to be polite and sometimes the worker was not polite to A (was a poor model). A card was given to A with which she could monitor the worker's politeness. Also in the practise sessions we established that the worker would be boss for ten minutes, and then, if A had worked hard, she could be the worker's boss for

as long as she was bossing me in an acceptable manner. The rest of the session was used to do more TA for Tots and to play with a friend.

This marks the end of the intervention as A was away for the last six school days with the measles, and then transferred to another school.

#### Recording of Progress

There were three methods of recording A's progress: the cards on which she was able to earn stars for target behaviors, tapes of her interaction with friends during the training sessions which allowed the worker to tabulate the number of minutes of cooperative play, and finally log notes which provided narrative comment on her behavior in the classroom.

#### Evaluation of Outcome

Figure 5 (page 164) shows that the extent of cooperative play increased from less than one minute during the first trial to nine minutes at the last session. Of more interest is the fact that in each of the early sessions there was a preliminary period of one to two minutes of cooperative play, followed by an argument, then a longer period of cooperation (ranging from two to six minutes). The argument did not occur during the last session, which followed the day of confrontation.

The number of socially acceptable behaviors (Figure 6,

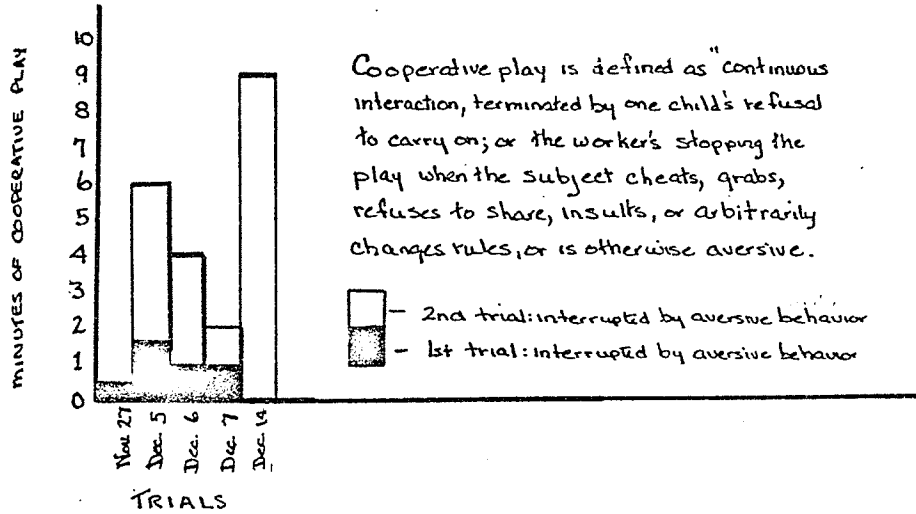


FIG. 5. Number & minutes of cooperative play - based on taped trials.

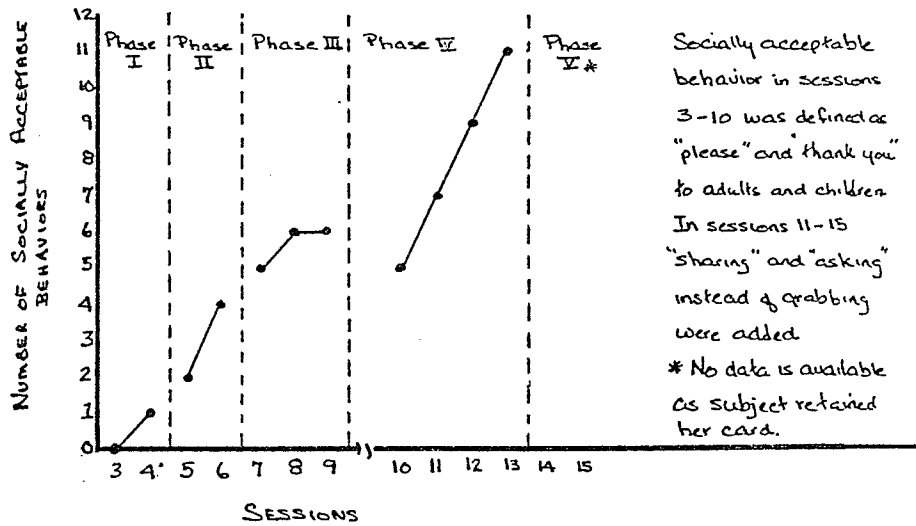


FIG. 6. Number of socially acceptable behaviors throughout the morning - based on report data.

page 164) also increased from two per morning to 10 on the final day, with only one decline in the eleventh session.

Log notes support the conclusion that A's behavior was changing in the desired direction...she was invited during the last session to sit with two friends during a movie, instead of being rejected or ignored.

### Discussion

While A's behavior appeared to be changing in the desired direction, I felt that we had hardly scratched the surface before treatment ended. It was not anticipated that any of the changes would be long lasting after such a limited time.

However, in terms of my learning, this case provided a wealth of riches. Not only were there technical problems of working in a behavioral mode, but there were also philosophical dilemmas about using physical force to maintain limits, a question not often discussed in learned journals. Finally, I had to consider the implication of such maxims as "unconditional positive regard" and its meaning in the therapeutic process.

### Technical problems

#### Baseline

I did not have the foresight to collect baseline data with the observation method that was used during the intervention. This precludes any attempt to demonstrate experimentally that change had occurred.

Observation codes

Code D (Appendix 3) was used on two occasions, November 15th and 16th. This presented some difficulty in that A's aversiveness tended to be as covert as she could make it and the observers had to be sitting on top of her to be accurate, but there was a worse problem. Reliability was apparently very low. Code definitions seemed to be much too subjective. As a meeting with the observers could not be immediately arranged to discuss this, I decided to try a second, less complicated observation system (Code E, Appendix 3) which merely indicates in a 15 second interval the presence of positive and negative interactions between the child and her peers and teachers. This was used the following day, but instructions to the observers were unclear and any behavior which was not highly aversive was coded as +, so the data were in no way comparable to data in Code D. The code can be used as an indication of dyadic behaviors, but again intentions were not sufficiently clear and a whole number of interchanges were recorded in each space with no indication of the sequence.

All this confusion and ineptness was followed by a closer look at the November 16th data and the realization that the code pages had been misnumbered by the observers. Re-analysis of the data in the correct order resulted in the reliability being acceptably high (91%). A return to Code D was prevented as the observers were not available

and then A was away in the last two weeks. The major decisions arising from direct observation were drawn from the narrative method. Figure 6 would be misleading if read in isolation from the log notes. It indicates steady improvement. In fact the intervention was characterized by constant set backs, retrenching and re-evaluating which brought home how well behavioral analysis lends itself to case monitoring, reassessment and treatment revision. As goals are operationalized and data collected routinely, scrutiny is much more rigorous.

#### Philosophical issues

Because the philosophical issues about the danger of "adhering" to an operant program without regard to cognitive and feeling factors, and about the use of physical force also applied to R, discussion will be deferred until later in the report.

In summary, working with A provided the chance to encounter and solve many of the difficulties I had wondered about in translating social learning theory into behavioral casework. These issues also arose in work with W.

CHAPTER VI: "W"; INTENSIVE,  
EXTENDED TREATMENT

Background

Physical development

W is the middle of three boys, 8, 5 and 2 years. When W was two months old his mother separated from the father. She was under constant tension during pregnancy due to the father's threats to remove the oldest child. She was on a very poor diet--all she could afford on her welfare budget. W did not breathe at birth and required resuscitation. When he was one month old he turned blue, an event which recurred until he was diagnosed at six months as having pneumonia. This continued until W was finally diagnosed at eight months as having bronchomalasia, a rare disease involving a faulty valve to his lung, resulting in inability to expel air. He had occasional crises during which he was given adrenalin, but was expected to outgrow the condition. Needless to say, his first year was fraught with difficulties. As a toddler he was described as a happy child who walked at 7½ months and talked early, but was very accident prone. He fell down stairs and split his head, burned his arm badly on an oven, broke his nose, etc. He was both active and "emotional".

### Social history

When W was one, his mother began to live with the father of his young brother. This was a period of family stability, but when W was three, his "father" left town to work. Simultaneously, W started nursery school, and his mother enrolled in a project to obtain her teaching degree. At this time W began to be hard to manage and to "blow-up" and "act out". In the last two years he has had trouble with neighbours; he was verbally abusive, hit and fought other children. At home he tried to refuse everything that was asked of him. He threw a temper tantrum (which consisted of lying on the floor, kicking and screaming) at least twice a day, and fought a great deal with his older brother. While this behavior was current, the mother thought it was lessening since she had begun living with another man. W "stomped around" less and could be "called" on his tantrums, but the behaviors still were occurring. The mother found it almost impossible to be consistent in the midst of her own frazzled life--trying to find a stable relationship with a man, holding down a demanding full time job, trying to meet the needs of a large extended Metis family, and caring for three active boys. However, she was aware of W's problem and was very receptive to suggestions which might help him. She was very open about her complicity in maintaining his behavior.

## Assessment

## Teacher-worker discussion

The teacher listed the following behaviors as troublesome:

1. Refused to follow instructions.
2. Not cooperating with other children.
3. Defiance--said "no" when asked to do something.
4. Continued to play or take out toys at clean up time.
5. Disruptive during large group activities after being corrected--speaking out, moving around (not sitting) poking others, taking toys out.
6. Bothered other children--hitting them, calling them names, hurting them during large group activities.
7. Talked loudly to others during listening time.
8. Marked another child's picture.
9. Took toys from other children.

## Informal observation (Beginning on October 2nd)

After a few days observing W in the classroom, I agreed that while the behaviors the teacher had mentioned do occur generally among five year olds, W engaged in them much more frequently and intensely than his peers. I was also impressed with his slyness (he engaged in some activities in such a way as to avoid detection), and his denial of behavior. On the positive side, he did enjoy craft activities and listening to stories and would play with children when they allowed him to be the boss, and complied if the teacher was able to wait him

out. He also enjoyed praise from the teacher. He played almost exclusively with girls but most children avoided him and moved away when he approached.

#### Coded observation

On October 6th, systematic observation began with Code B (Appendix 3) to measure compliance, hitting, opposition, complaining, and disruptive behaviors. This indicated that W was not non compliant as much as that his compliance only lasted for a very few seconds. He would start to do what he was asked, then return to do what he had wanted to do all along. We also discovered that the teacher gave a great number of instructions to W. Similarly, W's "bad" behavior occurred in bursts. After this trial run, the code was finalized to provide recording of the sequence in which behaviors occurred.

#### Behavioral Formulation: Pretreatment Phase

The behaviors, the stimuli provoking it, the rewards maintaining it, and the punishments imposed were conceived as shown in Table 4.

#### Treatment

Phase I: (October 24-November 10):  
Increasing deficit behavior and reducing  
excess behavior through reinforcement,  
time out and extinction

The two things which seemed critical were "hitting" and "refusal" to carry out requests made by the teacher.



Being hit or provoked by other children	Hits back Swears Makes rude gestures	Attention, feels "tough" As above As above	May be hurt, time out Told to sit on chair Ignored
Free play time	Runs Chases Kisses girls Eats, begs food	Release of energy Release of energy Attention Satisfies hunger and attention needs	Made to stop and find "something" to do  Ignored

Note.--The term "punishment" is used here in the common sense, as something which is intended to reduce behavior; not in the behavioral sense of something which does reduce behavior. In fact the "punishments" were notably ineffectual.

A program to increase compliance and reduce hitting was implemented. W's morning was divided into 30 minute intervals. If he received stars in 50% of the intervals, he would receive the reward. During the course of treatment, interval levels and criteria were changed but the basic program remained constant--W was rewarded for behaviors incompatible with hitting and noncompliance. He was punished for hitting by being placed in exclusion time out. At all times the worker carefully explained to W the reasons for the punishment and both the teacher and worker were lavish in their verbal praise and attention for appropriate behavior. At this point, other inappropriate behaviors were ignored by the teacher. The other children were encouraged to likewise ignore W's provocations, a tactic which met with very limited success! After three days we reduced the interval to 15 minutes as W was barely meeting the 50% criterion on the last two days. As fifteen minutes seemed a reasonable time to expect appropriate behavior and a time W seemed able to behave, we settled for that interval.

As well as rewards at school, W's mother provided back-up reinforcers at home, based on home notes from the worker. Simultaneously, she tried to be more consistent in limit setting and to give him more attention for "good" behaviors.

Phase II (November 11-17: Goals revised, cognitive restructuring added

By November 10th, graphical data indicated that W's behavior had improved and the criterion for reward was raised to 62% and then to 80%. Immediacy and duration requirements were added: "Do what the teacher says as soon as she asks you" rather than "Do what the teacher says" and "Keep at it until it is finished". Observation codes confirmed that compliance was less a problem than was sustained compliance. W used compliance as a way to escape unpleasant tasks--if he started to comply he could soon be lost in the melee and could then do as he wished. Similarly the interval was increased again to 30 minutes as W was having success with the 15 minute interval and data indicated that he was occasionally behaving for half hour periods.

The reward time was used to interpret to W that not all gestures were "put downs" and to discuss and practise with W alternate ways of expressing his anger. I also used the TA for Tots (Freed, 1973) material in class and in reward time as an introduction to building his self esteem.

Phase III (November 20-24):  
Goals extended

"No kicking, punching or squeezing hands" were added to the no hitting condition.

Phase IV (November 27-December 15):  
Reassessment and revision

Intervals were reduced to 25 minutes and the criteria

for success to 66% because that combination allowed W to receive his reward on the day he earned it. Under the previous conditions, W often only achieved success at 11:30 and his reward had to be deferred to the next day. When this happened, his behavior after the reward usually deteriorated. At this point the situation was reassessed and is presented in Table 5.

A new condition was again added. W was to practise alternate ways of responding to "bugging" or provocation from his girlfriends. We practised and discussed the following methods.

1. Telling the teacher or worker.
2. Telling the provocateur to "leave me alone".
3. Going somewhere else.
4. Telling the provocateur he wouldn't choose her to share his reward.
5. Keeping a report card on the chief provocateur "who got stars for not bugging me" and telling her that she couldn't come unless she had all the stars.
6. Finding different people to play with.
7. Recognizing when he was getting angry and leaving the situation before he blows up.

Whenever W tried one of these alternates he received praise in addition to his star. Whenever it became apparent to the worker that W was getting into a situation which would result in his being "bugged", he was reminded about the alternatives he could try.

TABLE 5  
Behavioral Formulation: Phase IV

Stimulus	Response	Consequence	
		Reward	Punishment
Physical contact with other kids	Moves away Complains to teacher	Praise Teacher deals with other child	None None
Perceiving a comment or look as an insult	Ignores it Verbally responds	Praise Argument with child	None None
Instruction to sit quietly with legs crossed in large group	Does as asked Talks, squeezes hands, pokes	Praise Attention from children, teacher	None TO, no star, ignore
Instruction to work or clean up	Does as asked Refuses	Praise, star reward Attention	TO Ignores
Going to gym	Participates when asked directly Still runs, etc. if not directly told to stop	Praise, etc. Attention from children, teacher	TO
Being provoked or "bugged" especially by C and T	Hits	"Macho-man" feeling	TO
Free play time	As before except doesn't hit Snuggles girls, looks up skirts	Attention Expend energy	Ignore

Note.--TO = time out

Phase V (December 15-22):  
Transfer control to teacher

I was away but the teacher continued praising appropriate behavior. W did not receive other formal rewards that week. No home notes were sent.

Phase VI (January 3-March 9):  
Beginning fading

When school began after Christmas break, W announced that he no longer needed a report. After that W received reports only when he asked, or when his behavior deteriorated. I kept the report, however, in order to have comparable data. The interval was reduced to 15 minute blocks so I could increase the criterion to 83% without W waiting until the next day to be rewarded. The reward was given each day the criterion was met, but the time spent was reduced and on several occasions W was encouraged to play with the toys in the room rather than the hall. The teacher often made the decision about whether W had earned his reward. She placed W in time out. Fewer prompts were given. After February 9th, W received his rewards on an intermittent basis--he was told that if I was around and saw him doing something "good" he might be allowed to play with the toys, but if I saw something "bad" he would not be rewarded. He was also told that he could request a card again if he felt he needed or wanted it. He asked twice, but each time he forgot about the card after he received two or three stars and an individual interview which assured him of his

importance to me. He practised and explored alternative activities during free play.

Once during this time I was away for a few days and the teacher took full responsibility for the program. Reassessment of W's behavior appears in Table 6.

Phase VII (March 10-April 30):  
Fading completed

My role shifted from primary intervention to coaching the teacher to identify potential natural rewards, and to enforce time out quickly and early in the behavior chain.

Because of W's history of three men (two fathers and a boyfriend) leaving him, and intense sibling rivalry, the worker was very concerned to make her leaving as supportive as possible. In order to assure W that he had not been replaced by another client, the worker did occasionally reward W and frequently just took him for a "talk" about "things". We planned a special farewell lunch for the last day the worker was at school. She continued to praise him for good behavior and began to reprimand him angrily for being "goofy". He was given the worker's phone number and told he could call her and talk for ten minutes whenever he felt lonely for her, which he did. This information on the treatment program is summarized in Table 7.

TABLE 6  
Behavioral Formulation: Phase VI

Stimulus	Response	Consequence	
		Reward	Punishment
Physical contact	Move away Ignore	Praise, star	None None
Perceiving a look or comment as insult	Ignore Verbally respond	Praise, star Attention and Interview re: practising alternate behavior	None
Told to sit quietly during group time	Does as asked Keeps talking	Praise, attention, star Attention from peers and teacher	None Ignore, TO, no star
Told to clean up or do work	Complies Refuses	Praise, attention, star Peer esteem Escapes aversive activity	None TO, no star
Going to gym	Participates Sits out quietly Asks worker to play	Praise, attention, star As above As above	None None None
Being "bugged"	Walks away Yells Tells teacher	Praise, attention, star Attention from peers Praise, attention, star	None Ignore None
Free play time	Runs, chases Finds something useful to do Eats and begs food	Attention, "macho-man" Praise, attention, star  Primary need satisfied, also peer attention	TO None  Ignore

Note.--TO = time out

TABLE 7

## Summary Description of Treatment Phases

Phase	Length of interval	Target behaviors	Criterion for reward	Report given
Phase I	30 minutes then 15 minutes	1. Don't hit 2. Do as the teacher asks	50% appropriate behavior increased to 66.6% (5/10— 4/6)	No Yes
Phase II	30 minutes	Add: 1) immediacy 2) duration to #2 above	80% (4/5)	Yes
Phase III	30 minutes	Add: No 1) kicking 2) pinching 3) squeezing hands	80% (4/5)	Yes
Phase IV	25 minutes	Add: Find an alternate response to provocation	66% (4/6)	Yes
Phase V	Worker absent--teacher forgot to reward appropriate behavior but reported behavior was "o.k."			
Phase VI	25 minutes	As above	a) 83.3% (5/6) b) intermittent-- "if I see you doing something good, we'd go"	a) Sometimes b) No
Phase VII	whole morning	As above	Did W have a good day? (Teacher's evaluation)	No

### Recording Progress

Three methods were used to record progress. Observation Code B (Appendix 3) was analysed for occurrence of inappropriate behaviors (oppose, hit, complain, disrupt, and aversive opposition). The percentage of intervals scored for appropriate behaviors was calculated and recorded.

Similarly, once W began receiving a report, the worker recorded the percentage of intervals in which he received stars for having not hit, and for doing as the teacher told him. As work went on, new criteria were added, as has been indicated in the previous section. When the report was being faded, the worker continued to keep track of this data, but W did not see it.

Finally, log notes were kept to aid the worker in recognizing some of the more subject occurrences during treatment. For example, notes were made of W's reactions to stimuli other than those noted in Code B.

### Evaluation of Outcome

Table 8 (page 183) shows the range and average percentage of appropriate and inappropriate behavior during baseline and the intervention phases as well as at one probe point after the intervention had ended. It presents data from both the report card and the observers (which is based on Code B, Appendix 3). Column one (observer data) shows that during baseline appropriate behavior ranged from 42.1% to 70.83%. The low rose to 66.6% and the high to 100% as

TABLE 8

Range and Average Percentages of Appropriate Behavior  
Based on Code B and Report Data

Phase	% range of appropriate behavior		Average & appropriate behavior		Inappropriate behavior		
	Code B	Report	Code B	Report	Range	Average %	
					Code B	Code B	
Baseline	42.10-70.83	NA	57.9	NA	29.1-85.7	52.7	
Phase I	66.6-100	50-100	84.96	79.58	9.3-41.9	18.93	
Phase II	no data	60-100	no data	80	no data	no data	
Phase III	91.66 (one data point)	80-100	91.66	86.6	29.1	29.1 (one point)	
Phase IV	85.7-96.4	83-100	88.05	93.73	14.2-57.1	33.52	
Phase V	-----no data ----- teacher reports behavior appropriate						
Phase VI	50-100	33.3-100	90.5	89.29	0-57.41	15.4	
Phase VII	100 (three data points)	66.6-83.3	100	88.04	0	0	
Post Termination		N/A	100	N/A	-	4.2	

soon as the contingency program began. Of more interest are the average percentages of appropriate and inappropriate behavior. The observer data indicates a rise from 57.9% acceptable behavior in baseline to above 84% throughout the intervention and post intervention probe. Although the report data does not include baseline, it too indicates a continuing rise in the level of "good" behavior from the beginning of the intervention to the end of Phase IV, with a slight decline from 93.73% in Phase IV to 88.09% at termination.

The data on the range of inappropriate behavior derives from Code B. The range of "bad" behaviors is rather inconclusive as on two occasions the low end of the range is the same (Baseline and Phase III) and on two other occasions the high end of the range is similar (Phases IV and VI). However at no time did inappropriate behavior reach the high point in baseline (85.7%). The last column which reports the average percentage of inappropriate behavior is not encouraging through the first four phases, as there is a steady increase (from 18.93% in Phase I to 33.52% in Phase IV). However there is a decline from Phase IV to Phase VII (33.52% to 9%) with a slight increase to 4.2% after the intervention had ended.

Fearing that some significant information had been hidden in data which averages behavior throughout phases, and wondering if some "spikes" of "bad" behavior might

account for the rise in inappropriate behavior reported in Phases I-IV in the last column of Table 8, date for each day of treatment was plotted and is presented in Figures 7 and 8 (pages 186 and 187).

Figure 7 (page 186) presents data regarding appropriate behavior from both the report and the observation code (Code B: Appendix 3). Report data will be discussed first, despite the lack of baseline information from this source. Two interesting facts emerge from visual inspection of this data. It indicates that from the beginning of the intervention, W usually met the criterion for reward, but as the intervention progressed, his behavior became more consistent. In the early stages, he had fluctuated from day to day, but towards the end of Phase VI his level of "good" behavior would maintain over a few days. It might be said that he had become more predictable. In the second place, it is interesting to note that there were a few days on which his behavior deteriorated badly. These will be discussed in the following section.

Observer data presents a slightly different picture. In the first place, it was clear that "spikes" of "bad" behavior were not accounting for the rising trend of inappropriate behavior reported in the last column of Table 8. On the contrary, observers did not pick up the "spikes" that the report card did. Possible reasons for this will also be discussed later. Observation data then, present a

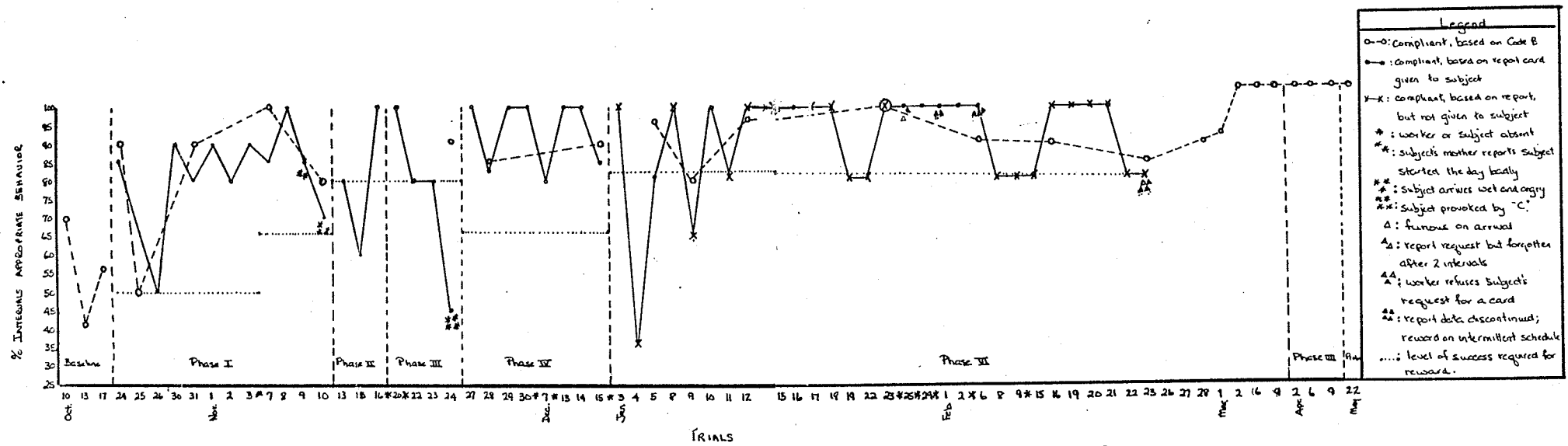


FIG. 7. Percentage of intervals during which subject displayed appropriate behavior - Code B and Report data.

picture of much more consistent appropriate behavior, which declined from January 23rd to February 23rd, but rose by the end of Phase VI to 100% and maintained through Phase VII, extending to the probe after termination.

Secondly, observer data does include baseline information. Clearly, there is an increase in appropriate behavior from baseline to the intervention phases. At no time during the intervention did observers report the low levels of appropriate behavior found in baseline. According to this data, W consistently received his reward. In fact, this did not happen. On November 24th and January 9th, when there is data from both observers and the report, W was not rewarded, despite the observer data showing he had met the criterion. This inconsistency in data will be discussed later.

Figure 8 (page 188) is presented because it seemed important to isolate inappropriate behavior and examine it. The information in this figure is from observation data. Visual inspection confirms that there was a decrease in "bad" behaviors, from baseline to the intervention. Furthermore, as the intervention continued the "bad" behaviors became less frequent. It is interesting to see that this figure shows clear behavior spikes which were not present in the observer data in Figure 8. There is not an increase in inappropriate behavior from January 23rd to February 23rd as might have been assumed from looking only at Figure 7.

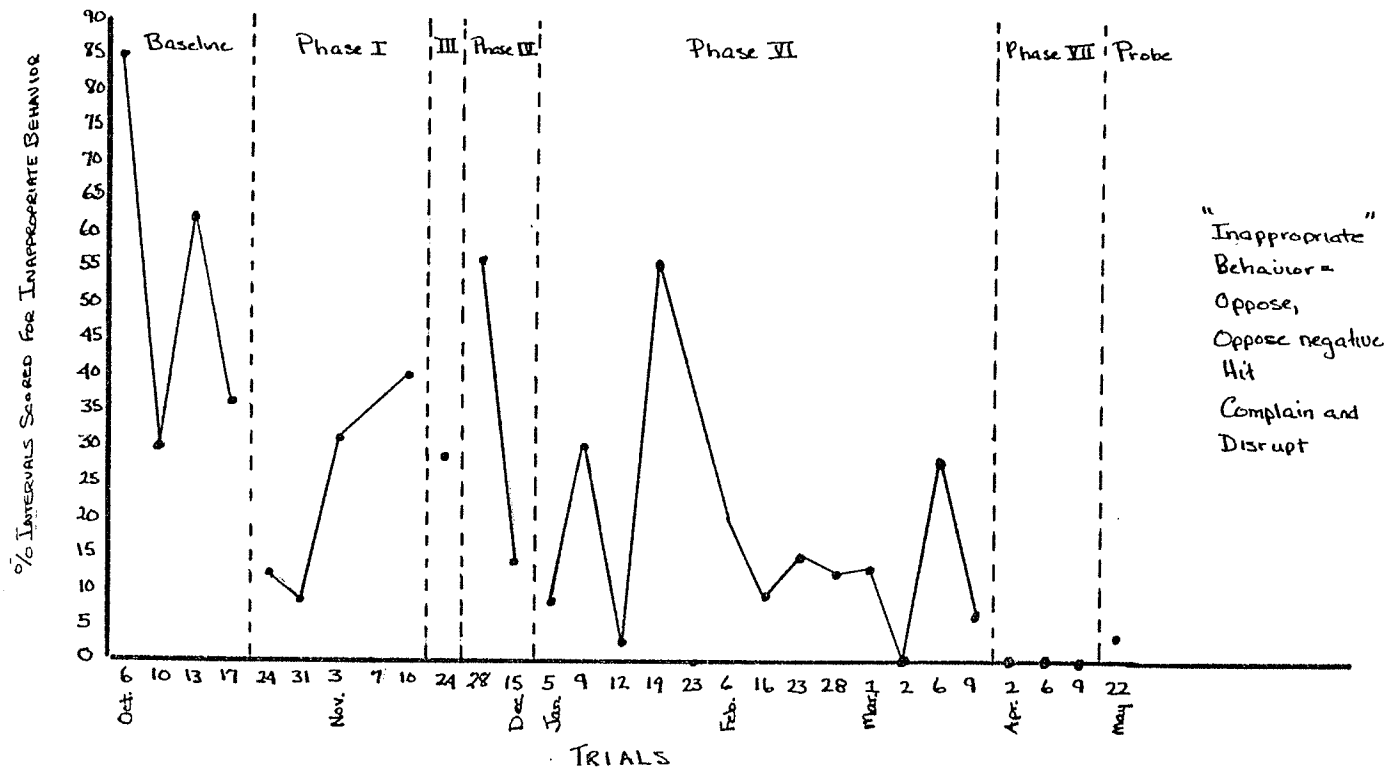


FIG. 8. Percentage intervals scored for inappropriate behavior - based on Code B and Code B, revision 1.

(It would have been a mistake to assume that an increase of appropriate behavior necessarily meant a decrease in inappropriate behavior, as both behaviors could be tallied in one observation interval.) To the contrary, there was a slight decline. The probe shows 4.2% inappropriate behavior.

### Discussion

#### The observation systems

The use of two observation systems presented a more balanced picture than would have been available with only one. For example, observers did not pick up behavior "spikes" (page 186) which often signalled that something was troubling W, or was wrong with the program. On November 24th, report data shows only 40% appropriate behavior. This "flagged" the need to look for problems. Two factors suggested themselves. On November 23rd he did not reach the criterion until 11:30, so his reward had to be postponed until the morning of the 24th. This problem had been mentioned earlier. Also W was provoked continuously by C, a girl who attends day care with W, and who can be most persistent in her "bugging". She revels in W's frustration and even, apparently, being hit by him. When he plays with other children she is obnoxious to W, who can be relied upon to hit, punch or kick her. Following this re-evaluation, I began to train W in alternate ways of responding to provocation and shortened the

interval so rewards could usually be collected before 11:30.

Over time, these spikes should have turned up in observer data. Their absence causes me to wonder whether W was more reactive to observation than he seemed to be. His behavior was not, however, characterized by bursts but small instances of non-compliance throughout the morning. This would account for the inconsistency of results between observers and the report on some days--(e.g. November 24th and January 9th--Figure 8).

The problem with relying on the report solely is that it was impossible to track with complete accuracy, the behavior of one child during a whole morning. I suspect many transgressions escaped my notice. The failure to collect comparable data during baseline weakens the effectiveness of the report as an indicator of change.

The observation code provided very useful information on the sequences of W's behavior, the stimuli which elicited it and the consequences maintaining it. For example, it focussed attention on the importance of free play as a discriminative stimulus for acting out and pointed out that W was not compliant immediately--that rather he began to comply then moved away from the requested task. Furthermore, as the observers focussed exclusively on W for a short period, the data was probably more accurate.

#### Interval length

The need to establish interval lengths which will

assure initial success was recognized, but not paid sufficient attention initially. This resulted in the intervals on the first three days being too long and in W's failure to be rewarded. Also the increase to 30 minutes from 15 minutes between Phases I and II may have been too great, especially as it coincided with a raise in the criterion level.

#### The importance of thoughts and feelings

The importance of being sensitive to and recognizing and dealing with the thoughts, feelings and events in the life of the client outside the school situation has not been sufficiently emphasized in the research literature. W's emotions certainly influenced his ability to act appropriately in school. On each of the days he did very poorly, something had happened in his life outside of school which set the stage for difficulties in the classroom. On November 10th he arrived, soaked from head to foot with snow and reported that he had been pushed into a snow bank. He was both furious and embarrassed, and took his frustration out on everyone he came in contact with. It was essential to take him aside, let him explain what had happened and how he felt about it, acknowledge the feelings he was experiencing and then go on to point out that he was now in a different place and it would not help anyone if he just made matters worse by continuing to get into trouble. The work of establishing school as an  $S^D$  for behaving

differently continued intermittently through the intervention.

Log notes describe another incident, on November 15th.

W is back today. He only managed three stars as he: didn't do as the teacher asked, hit another child, refused to clean up and pushed me. Generally, he spent the day testing to see if the rules were still in effect after his absence. This was evident as he looked at me after each infraction to see what my response was. We talked about his behavior and he said he knows why he didn't get his stars and listed what he had done wrong. He said nothing was bothering him.

Children who have experienced even five years of inconsistent upbringing find it necessary to find out whether the worker is prepared to follow through on consequences. It usually takes several trials before they are convinced of it, and these trials should not send the worker scurrying to change the program. She should recognize what is really at stake....trust. Unless the client is able to trust the worker, the intervention is seriously jeopardized.

Again, the second day after Christmas break, W had a bad day. Looking at the program focussed attention on the fact that W had been without access to rewards or a report during the last week of school. (Anticipating my absence, I had arranged for the teacher to send notes to the mother who would reward W if he had behaved well but the teacher had forgotten to do this.) When W returned and did not request a report, I decided to see what would

happen without it. Results were enlightening, if discouraging. At this point it seemed that W would have to return to a report for a little while at least.

Before a firm decision was made, the mother was interviewed and said that during Christmas vacation the family had moved, the mother had "broken up" with her friend, several new limits had been placed on the children's behavior at home and the mother had also been ill much of the time. This information allowed me to be much more confident of the need to return to the old ways of doing things until W's world had stabilized. It turned out that only one report was necessary before W again said he didn't need it. We agreed that if, in the future, he didn't do well or just wanted a report, he could have it. This move was perhaps facilitated by the interview which dealt with the feelings which arise when we have to move away from familiar places and when people we love are ill. It is certainly my conviction that an approach which takes into account both overt behaviors and inner processes has a better chance of success than either approach taken in splendid isolation.

#### Clinical significance

Evaluation of outcome must consider not only whether change takes place, but also whether the change is clinically significant. In this practicum, the crucial question becomes: how much of the time may we expect a normal child to behave in the school situation? Is 80% acceptable,

providing that the behavior in the remaining 20% of time is not marked by highly intense and dangerous activity? Patterson (1976) has provided normative data on coercive behaviors but we do not know of other normative data that might shed light on this question. For the purposes of the practicum it was decided that W's behavior would be acceptable when he no longer hit in anger, no longer pinched and kicked and when the teacher thought she could rely on him to do as he was asked most of the time. She also wanted him to respond to instructions to "go sit on a chair until you are ready to join us" without having a temper tantrum or refusing to go on his own steam. In sum, when she felt comfortable that she could manage W on her own without relying on rewards outside the classroom, there would have been enough change. This is a highly subjective judgement and any merit it may have depends a great deal on the teacher's ability to find ways to encourage the child to respond appropriately in class. It also rests squarely on the hope (in this case a reality) that the teacher has reasonable standards of behavior and is not repressive or punitive.

In this light, the intervention was successful. While W continued to enjoy being the center of attention, he found more acceptable ways of seeking it. Instead of kissing girls, he invited them to play games with him, or to come to the Adventure People. Sometimes he was just more subtle. For instance, instead of throwing a girl on the

floor and himself on top of her for a wiggle, he was content with peering up her skirt! He was more able to verbalize his feelings...he often said that he needed a snuggle from the worker. Before, he would leap at her and strangle her. He always responded to the teacher's request that he sit in a chair for a while without a display of temper, and he returned quickly to the group. He spent less time chasing around the room and more time working, playing games and reading. He did not hit, pinch, or squeeze.

#### The role of "significant others"

Finally, it is necessary to comment on the role played by W's mother, which the worker feels was significant in helping W to change. At the beginning, she offered and provided home based reinforcement contingent on a note indicating that W had had a good week. She was always open about difficulties at home which might be influencing W at school. She adopted firm limits at home and tried to enforce them consistently. She worked hard at putting her own, chaotic life in order so that W might experience some stability.

Working with W provided an invaluable experience. Because the treatment was both intense and protracted, I gained some experience in several aspects of behavioral casework. It provided a good base from which to begin to work with R.

CHAPTER VII: "R" NON COMPLIANCE  
CHARACTERIZED BY AGGRESSION,  
WITHDRAWAL AND IGNORING

In retrospect, the writer realizes that each of the three children could be characterized as having more of one of the components of conduct disorder than another. A was more non compliant than anything else, W was also non compliant but this was manifested in disruptiveness as he hit, swore and chased other children thus upsetting the classroom as a whole (Herbert, 1978). R's non compliance took the form of not only withdrawal from and ignoring of aversive stimuli, but also intense, violent aggression. R did not upset the entire class, but tended to interact with only a few children. When things did not go as he hoped, he would hit or swear at them until they capitulated to his demands. He rarely ignored or withdrew from children, but constantly handled his disputes with the teacher and me in this manner.

A Consideration of Aggression

Definition and description

Herbert (1978) suggests that aggression may be a component of conduct disordered behavior. Patterson sees it as part of the coercion process (1976). Bandura (1973)

defines it as "behavior that results in personal injury and in the destruction of property" (page 5). The injury may be psychological or physical. Bandura is quick to point out that aversiveness is not the sole defining characteristic of aggression, and that any definition must recognize that there are social labelling processes at work...a problem encountered while negotiating goals with R's mother.

There is considerable semantic confusion when "aggression" is described in Chapter IV. In view of the confusion it seemed necessary to adopt for the purposes of the practicum, the definition which appeared to be the most inclusive and descriptive of R's behavior, that which Jehu suggests

Specific instances of such behavior by children include destructiveness, disruption, physical attack and verbal assault (Patterson et al., 1969, and Cobb and Hops, 1972). A child is said to be destructive when he destroys, damages or attempts to damage any object. Disruptive behavior involves interference with another person so that he is prevented from doing something or caused displeasure. Physical attack is defined as an actual or attempted assault on another person of sufficient intensity to potentially inflict pain. Verbal abuse occurs either when a child screams or talks loudly enough to be unpleasant to another person if carried on for sufficient time or when the content of the speech is abusive (1974, page 1).

There appear to be as many theories about the causation of aggression as there are definitions. Congruent with the approach throughout this intervention, the writer suggests

that aggression results from the interplay of three factors: biological determinants, previous learning, and contemporary influences. These are discussed at length by Bandura (1973), Jehu (1974) and Herbert (1978). Working with R, it was imperative to investigate the role that each of these factors played in his aggressiveness, and more will be said about that later. This is not to deny that there may be, in fact there probably is, a primary emotion which may result in the expression of aggression. However, it also seems clear that aggression is not an instinct, but a learned way of responding. The question then is, how is this response learned and once it is acquired, how is it maintained? Herbert (1978) describes the situations in which aggression appears to flourish. These include parental permissiveness of aggression and a combination of lax discipline combined with hostile attitudes. Bandura (1973) also argues that children who have aggressive models may also become aggressive.

The aggressive response may be maintained because it is under the control of discriminative stimuli or because it provides a reward to the aggressor...for example, attention and admiration from his peers. Frequently, both these factors are operating simultaneously.

Behavioral approaches to treatment of aggression have focused on altering the stimuli which evoke the aggression (desensitization, relaxation training) and/or the rewards

it offers. This may involve rewarding behavior incompatible with aggression, training alternate responses if none exist, punishing violence or ignoring it. This brief discussion of a very convoluted topic, provides the background against which to consider the intervention with R, a native boy.

#### Withdrawal and Ignoring as Non Compliance

It is speculated here that R's cultural background was significant in the way his non-compliance was manifested. It was mentioned earlier that some native infants did not train their mothers to attend to their crying...in fact crying was ignored and therefore extinguished. Infants may then need to discover alternate ways in which to have their needs met.

Young native children are often socialized through "teasing"--unacceptable behaviors are ridiculed. Children who exhibit feelings (e.g. anger and sorrow) are teased--an approach which is highly aversive to the child. Generally stoic behavior is preferred. Children are not only exposed to stoic models, but are praised for being able to conceal their feelings. Stoicism is thus reinforced.

Faced with the need to discover ways in which to cope with their world, it is hypothesized that withdrawal and ignoring become very useful behaviors. They are approved because they are manifestations of stoicism and are also

defenses against teasing--if the child appears not to hear, he is not vulnerable. In addition, many native families value members who were acknowledged as shamens. Early identification of potential shamens is often made on the basis of their withdrawn, staring behavior, so they are reinforced for withdrawing. The effect of the action, that they avoid doing what they are asked and are extremely non-compliant was not noticed.

This line of thought suggests that among native children at least, withdrawing and ignoring behavior may not be examples of "neurotic" behavior, but may be seen more accurately as manifestations of non-compliance.

### Case Report

#### Assessment

##### Cultural factors

It was not important to determine whether R had treaty status, but it was significant that R's mother in many ways identified strongly with the native culture and traditions, and said very clearly on several occasions that she did not want the school to take away from R some of the behaviors which were acceptable by native standards, but might be of concern in a white school. At the same time, she recognized that some of the traditional ways of behaving might result in long term difficulties for her son. Much of the work with the mother had to revolve around sorting out and defining those activities which should be changed and those which

should not.

### Physical history

R's prenatal history was unremarkable as was his early development. However, at age two, he fell and hit his head against the radiator, and shortly thereafter began to suffer from fainting spells. Eventually, epilepsy was diagnosed and R was treated with Phenobarbitol. This controlled the epilepsy but made R extremely irritable and sleepy.

R's mother was very circumspect about the information she would provide about this period of R's life. (She said she had been accused of not being a proper mother and had had to go before a board of ten doctors and nurses to prove that she could look after her children. That, together with her experience with other social workers and health professionals whom she perceived as decidedly unhelpful, made the initial interviews very difficult for both the worker and the mother.) However, she did say that this was the time when she began to live with the father of the children, who strongly resented the side effects of the drugs and her "spoiling" R because he was ill. As a result of this, R only received medication sporadically, and finally he was withdrawn from it altogether. The nurse at the school thought that this had occurred when Mrs. S had left the children in the father's care and gone to British Columbia for six months last year. Prior to R entering school, his condition had progressed to the point that he was having

five or six seizures a day and as many at night. During the day they took the form of running to an adult and clinging to him/her while R stood rigidly and stared into space for a minute or two. At night, he would awaken screaming and crying, then run around the house for three or four minutes. Then he would return to bed and sleep. When the mother returned to the family, she insisted that R again see the doctor and Tegretol was prescribed. R did not attend more than the first few days of school in the fall, as the mother did not want him to suffer the embarrassment of having a seizure at school. He started to attend school regularly after Christmas, when his daytime seizures were controlled.

I was very uncomfortable about relying heavily on the mother's information about R's epilepsy but Mrs S refused to give permission for me to contact the clinic which R attended. One of the questions that arose was whether there might be a physical cause (related to the epilepsy) of R's apparent inability to sit still for any period of time, or to attend to fine motor tasks. Similarly, it was unclear whether his staring into space and his grimacing were merely habits as his mother claimed or were physically caused. These questions had to go unanswered in the early stages of assessment and treatment.

#### Family situation

All was not well in the S marriage. (When the worker

first asked to see a parent, Mr S came in. The next night the worker received a call at home from Mrs. S saying she had found a paper with the worker's name on it in R's pocket. Apparently, the day of the interview she had left Mr. S and had abducted the children from her husband just prior to calling the worker. She claimed she would not return to Mr. S. However, two days later she had gone home again.) There were continual fights over money and the disciplining of the children. Both parents worked sporadically, Mr. S in the spring, summer and fall, and Mrs. S whenever Mr. S withholds money for food and clothes. If both are working they either hire a babysitter for the children or impose on a relative. During the time we worked together, Mr. and Mrs. S decided to divide the responsibility for the children. Mr. S makes all the decisions about R's 7 year old sister, and Mrs. S about R. This is rigidly adhered to although Mr. S at times has all the primary child care responsibility.

R's sister is the stereotype of the shy, conforming and gentle Indian girl. She had no difficulties at school and had a number of friends. R in contrast, had no friends, had trouble even in nursery school (he ran away on several occasions), often refused to do as he was asked by his parents and had been punished both physically (spanking) and in the native manner by being teased. The father said nothing worked so he has given up trying to discipline R.

R's mother demanded very little of him and frequently was inconsistent with him, giving in to his demands after he nagged her long enough. She constantly defended him against criticism from others and had a great deal of energy invested in wanting others to perceive him as "normal." The father attempted to be consistent and firm but had his decisions reversed by the mother who accused him of "picking" on R and favouring his sister. The father punished R's aggressiveness but the father himself says he was in trouble all his life for fighting.

At home, R responded to requests from his parents and to their arguments by going into a corner and ignoring what is happening. He fought with his sister, but not with his parents. The parents responded to R's withdrawal by ignoring it. When he returned to the real world, there is no mention of what provoked his behavior. Feelings were not discussed at any time, and stoicism was the model the mother aspired to, but did not seem to achieve. Herbert's (1978) comments that conduct disordered behavior may be an entirely appropriate reaction to a pathological home situation has relevance here. However, R's strategies of adjustment were bringing him into conflict with the school.

#### Informal observation

In the first week of the practicum the teacher had commented that she saw R "doing some strange things" but

that he did not return often enough to pinpoint these behaviors. After Christmas, both the teacher and I commented on R being unable to sit still, his tendency to withdraw for long periods, his quickness to interpret any comment from another child as an insult, and his general twitchiness. During the first week of school after Christmas he did no work at all, but on January 11th, he worked quietly with the teacher for a half hour. Later he snatched a broom from another child and when that child complained, R kicked him hard in the stomach, then went and hid behind the counter and stayed there for thirteen minutes. Simultaneously, we had been observing him more systematically.

#### Formal observation

Initially, I thought that the same code (Code B: Appendix 3) which had been used for W would be appropriate, as R was often disruptive, non-compliant, and he hit as well. However, after six sessions, it was apparent that Code B did not capture R's high rates of withdrawing or his ignoring behaviors. Similarly, it did not reflect the intensity of his hitting. However, since any hitting was intense, that definition remained the same in the new code. Code D (Appendix 3) contained the same six stimuli as Code B but the responses were: Verbal Positive, Verbal Negative, Hit, Ignore, Approach, Withdraw and Comply. This did not attempt to monitor R's disruptiveness as the teacher thought she could live with it, but not the withdrawing and

ignoring, which the worker interpreted as manifestations of non-compliance.

#### Behavioral formulation

Four days of baseline data, in addition to the material just presented, contribute to the formulation (Table 9) of R's classroom behavior.

#### Treatment

The goals of R's treatment were negotiated with the teacher, the parent and the worker, who would have liked to have included R in the planning. (While R was physically present when the intervention was explained, it would be folly to say that he was in any way involved in the decision making process. He was totally uncommunicative, except to suggest that he wanted a chance to "go to the Adventure People like W" and to venture a nod when he was asked if he knew how "it was going to work". In the initial and middle stages of treatment, R's refusal to talk to me was a continual source of frustration as well as a challenge to find non verbal forms of communication.)

The teacher thought it was important that R learn to do as he was asked, and to stop fighting with the other children. In attempting to specify what "doing what he was asked" entailed, she suggested that R should walk in the halls instead of running, sit quietly in group time and clean up the toys he was playing with. Also she wanted

TABLE 9

## Behavioral Formulation: Pretreatment

Stimulus	Response	Consequence	
		Reward	Punishment
A child taking a toy R is playing with or asking R to share it	Hits, kicks, swings large blocks at child Verbally abusive Withdraws Ignores the request	Undisputed possession Attention: peers, teacher Feels "tough" Release of energy	Child may hit back Avoided by some children
A child hits back or refuses to be intimidated	Hitting escalates Verbal abuse Withdraws	As above	Told to sit on a chair Reprimanded
Asked to engage in an activity he dislikes or hasn't tried before	Withdraws Ignores request	Escape from an aversive situation Avoids loss of face	None that he perceives but may miss something he enjoys when he has withdrawn
Worker trying to explain why R is in trouble	Withdraws Puts hands over ears, ignores	Avoids loss of face	None that he perceives
Group time, asked to sit still, cross legs, and keep hands to himself	Withdraws Ignores discussion Rols around floor Kicks Pinches Makes rude gestures Plays with blocks	Escape from aversion Release of energy Attention: teacher and peers	May be told to sit on a chair

him to participate in activities other than those he routinely chose.

When these behaviors were presented to the mother she challenged the necessity of R always having to do what the other kids do. She thought that as an individual he should have the right to decide what he wanted to do and she saw no need for him to line up and walk down the halls or sit with his legs crossed. However, she did agree that he should do some of the academic activities, and should not fight, although she thought that he should be allowed to retaliate.

Through the process of negotiation it was decided that the teacher would ignore R's unwillingness to sit quietly in the group as long as he was not disruptive to the others. She would also ignore, for the present, his refusal to engage in work, his frequent forays into the hall and bathroom, his dirty looks, and his swearing. It was speculated that the removal of attention to these activities would make them less appealing. Moreover, it was thought that R might in fact, be unable, more than unwilling, to sit quietly and refrain from sudden bursts of large motor activity. It seemed appropriate to reduce the demands being made of him until his more distressing problems were tackled.

Two immediate goals were agreed upon. R should stop fighting, which was defined as "hitting, kicking, strangling, and throwing down which results in injury to or complaint from another child". He was also to increase his

compliance to requests from the teacher. "Do what the teacher tells." This would be reflected in decreased time spent ignoring instructions and withdrawing from activities, two of the most worrisome behaviors. Having decided which behaviors to ignore, the specific areas in which requests were to be obeyed included: sitting quietly in the library, (the librarian was extremely strict about the children's behavior while she read to them and this had resulted on several occasions in confrontations in which the librarian, the teacher and the worker were all opposed to R. As R had to go to the library, and as he could sit still for at least five minutes, this seemed a legitimate requirement), coming to another area in the school at the same time as the rest of the class and ceasing activity in the classroom and the gym when it became dangerous to other children. The teacher agreed to try to confine her instructions to R to those specific areas. Recognizing that it can be very unpleasant to be in a situation where one has no friends, the third goal of increasing positive peer interactions was added.

Long term goals I identified were:

1. Increasing R's attention span
2. Helping R to identify and verbalize feelings
3. Increasing participation in academic activities
4. Assisting him in listening to verbal explanations of the consequences of his behavior

5. Altering his perception that everyone is always insulting him (his extreme defensiveness)
6. Establishing a relationship of trust and liking within which the work could take place.

#### Reinforcing appropriate behavior

Once the goals were negotiated a treatment program was initiated. It was similar to W's although the intervals were altered to reflect intervals in which R could succeed, starting with ten minutes and increasing to fifteen. R did not receive the report for as long as W did, because he found the attention to be unpleasant after the initial novelty wore off. As I was then able to talk to R about his behavior, the card was discontinued in favor of verbal feedback. It was agreed that if he had a bad day, the report would be reinstated, which may be interpreted as a threat of punishment.

#### Time out and extinction

R was placed in immediate exclusion time out when he did fight. Similarly, he was timed out when he was highly disruptive to other children and refused to do as he was asked in the previously described situations where conformity was essential. There was, in R's program, much more attention paid to ignoring troublesome behaviors, in an effort to make the environment more pleasant, to communicate respect for cultural differences and to underline the

belief that the parent had the right to decide treatment goals for her son.

#### Increasing peer interaction

Luckily, the need to increase positive peer interactions took care of itself as R consistently chose a coveted reward which allowed him to bring a friend. He had no difficulty finding someone to come with him despite his frequent miserable behavior to them...refusing to share the toys or my attention. As the children perceived that R controlled access to these favored activities, they chose to play with him during class time, hoping that he, in turn, would choose them. In addition, a new boy came to school who was not at all intimidated by R's aggressiveness and after a few days of altercation an armed truce was established based first on a grudging respect and later a genuine enjoyment of similar activities.

#### Shaping

The problems of lack of self esteem and fear of failure were tackled by praising the things R could do (playing with blocks) or any attempt he made at a new venture. In effect this approximated shaping, but there was no attempt to structure a program. (It was interesting that during the first month of the program, I had to give the praise very quietly and almost secretly, as being singled out was aversive to R.)

Modelling

I also tried to introduce into R's play situations in which I performed badly, then commented casually "I can't do that very well, but that's okay, I'm good at doing other things" or "Oh, well, I guess I can't be good at everything and that's okay". Similarly, I took pains to point out that none of the children R liked were good at everything and he still liked them. I also exposed R to children who handled their anger differently than he did and used puppets to demonstrate different ways of being mad.

Mrs. S was also able to let R try new ways of handling his anger and fear. In the past she had modelled stoicism and when that became too much, she had exploded in anger or escaped into alcohol. While there was no suggestion that she should change (she had been adamant from the beginning that she was not the target of change) Mrs. S did allow and encourage R to express his emotions. Since Mrs. S herself had begun to question the health of her past coping mechanisms she was able to agree to try this with her son.

Finally as R showed some willingness to listen, I told him about how my own children had learned to express anger. As R showed some interest in this, a plastic punching clown was brought to the school and R was invited to hit it when he was mad. By this time however, he was angry much less often and he did not have to use the clown in this way. He did use it to play and was encouraged to hit it as hard as

he could, as often as he could. This became his favourite reward in the last few weeks of work.

### Cognitive approaches

As the work with R progressed, the role of thoughts and feelings influencing his behavior became obvious.

Recognizing and labelling feelings. One difficulty Mrs. S and the worker had discussed was R's inability to identify his anger and feelings of rejection and respond to them before they exploded. Two components were isolated: early identification and alternative methods of responding. Until the last two weeks of intervention, the work was significantly hindered by R's consistent failure to respond verbally. At first he refused to listen or talk, then he would listen, but not talk. Finally, he began to say what he was thinking, but in a very tentative way. This precluded work with this problem.

It was also fascinating to see R's uncanny persistence in maladaptive behaviors despite aversive consequences. Once R had chosen a course of action, he seemed to feel compelled to stay with it until the bitter end. I speculated that this stubbornness may have occurred because R felt that compromise or change involved loss of face, something which has been critical in the past in her work with native people. This is slightly different from the theory that past inconsistent reinforcement of such behavior had caused it to

persist despite the introduction of new contingencies which had not yet been adequately learned.

Comparator processes. Some of R's apparent stubbornness was in fact not non-compliance for the sake of refusing but for fear of failure. These situations arose whenever he was asked to participate in an activity with which he was not familiar. At these times he ignored the instructions. However he would remain in view of what was going on and if he decided that he could do the thing, he would join the group. This shyness is very common among native children and it may be a result of the teasing way in which they are socialized. They learn to avoid ridicule by not risking themselves, but once they have made a decision, they feel abandoning it might result in a loss of face. This may have been compounded for R by his parent's strong feeling that natives had to constantly prove their equality to whites. Mahoney (1974) refers to this as the comparator process in which standards are set according to socially acquired performance criteria. This in part explains the difficulty in getting R to accept the praise he was offered. While his behavior met my criteria, it did not meet those he thought his parents demanded.

R's only other reference was his sister, who was a high achiever. Since this difficulty could only be partially resolved in the school setting, the mother's assistance was enlisted. The interview marked a turning point

in the hostile relationship that had existed between the mother and I. The difficulties that R had in believing that he was a competent person because of the comparisons he is confronting were outlined. As I verbalized my recognition of the native position in white society and willingness to respect traditional values, the mother came to see the ramifications these had for a small child in a white community. We were able to clearly identify those values which she wished to maintain and those she could let go. After this interview Mrs. S was very helpful in praising the work that R did bring home and in trying to tell him that he was his own person so she did not expect him to be like his sister.

Restructuring. Another problem (and these are all related to one another) was his quickness to perceive the most innocuous comment or action as an insult or threat. He frequently made these "inferential errors" (Mahoney, 1974), which resulted in his taking a swing at some nonplussed child. This was tackled late in the intervention when R was able and willing to listen and give credence to my interpretation of what had happened.

As the worker was able to help R cognitively restructure the situation, he seemed less quick to attribute hostility to others. Of course, one wonders whether this would continue as R is exposed not only at home to his mother's tendency to interpret many acts as having hostile intent

but also to racial prejudice in the world at large.

Throughout the intervention, the operant procedures went hand in hand with attention to cognitive factors. These in turn were greatly enhanced as the relationship among R, his mother and the worker improved.

#### Relationship building

The attempt to delineate the crucial ingredients of a helping relationship will continue long after this practicum has been written. There is concensus, however, that liking, respect, empathy, warmth and acceptance are crucial to establishing a trusting relationship in which growth can occur. While the relationship between R and the worker was my main concern, the work became much easier as the mother's feelings toward the worker altered from anger, suspicion and fear to respect, optimism and cautious belief that the worker could be counted on to do as she said.

Liking. Goldstein's discussion of the importance of "attraction" in establishing "liking" sheds some light on the initial difficulties the worker and R experienced.

Structuring a client so he will be attracted to his helper is quite simply a matter of (1) telling him he will like his helper, (2) briefly describing to him positive characteristics of his helper, or (3) clarifying what he may realistically anticipate will go on in his meetings with the helper. (1975), p.14)

Of these only the last was possible, and one wonders whether

R was able to fully comprehend what was being said about the nature of the work, and if he understood it, whether he believed it. Research also indicates that the more similar the client and helper are in important attitudes, background and values, the greater will be the attraction. Obviously the worker and R were miles apart on these criteria.

Another important factor influencing liking has been imitation. This involves exposing the client to a person who plays the part of a client who likes the helper and clearly says so. Luckily, W was a model and this clearly influenced R's willingness to engage in the work.

However, liking is a two-way street and the worker often found R a very unlikable child. The old maxim about liking the child but not the behavior came under heavy fire with both R and A. It became necessary to focus clearly on the positive attributes...for example, R's enjoyment of gross motor activities, so that I did not become discouraged by his refusal to be touched (physically or psychologically) or his occasionally open rejection of the intervention strategies. Whenever I felt that R was starting to like me, he would find an occasion to yell "Don't say 'good' to me, I don't need you to talk to me", or he would throw the card at me if he hadn't received a star and holler "Keep your old card, I don't want your dumb stars anyway, and I don't like you neither". This feeling of being

rejected had to be counteracted by a knowledge of the dynamics which had produced the behavior and by a belief that these were not intrinsic and static characteristics which were unchangeable. The social learning approach facilitates this attitude.

Respect. Goldstein suggests that respect is facilitated in part by the client's perception of the worker being an expert. To some extent, most children also perceive adults as having more status than they do, and whites as having more than natives. I was inclined to think that status and expertise were inimical rather than facilitative, because R had come to experience adults in the school settings as aversive (remember that he ran away from nursery school on several occasions). He expected to be badly treated by white people who didn't understand Indian ways and finally, he had heard at home stories about the uselessness of counsellors. In addition, while his mother was questioning the need for intervention, the worker's expertise was clearly doubted by the most influential person in his life.

Empathy. The turning point in the relationship with R came after a major confrontation over limits had occurred. As R was getting ready to leave school, I responded to his angry demeanor by commenting that it must be terrible to be five years old and furious with a grown up. It is worse when you have to go to the person you are mad at and ask her for help

so you could do up your zipper before you could get away from her. At this point, for the first time,

R said: "Yea, it gets me mad"

W: If it happened to me I'd be so mad I'd want to hit somebody or something.

R: Yea, me, I'd knock these walls down with my bare hands and then never come back here.

Also for the first time, R allowed the worker to pick him up and sit in the hall and rock him while all the anger poured out.

Warmth and acceptance. When a therapist communicates warmth to a client that warmth is generally reciprocated. However with R there was a period in which he appeared to resist accepting the warmth that was offered. As the worker persevered in accepting his experiences as part of him, he gradually was able to enjoy the relationship. Truax and Carkhuff (1964) include a rider in their definition of warmth--the worker should not impose conditions on their acceptance of the client. This should not be confused with the need in a behavioral intervention to administer rewards contingently. Refusal to deliver a reward is not failure to accept the child unconditionally as long as the refusal is done in such a way as the child is not made to feel inferior when he has failed to be rewarded. On the other

hand, there may be times when the operant program per se has to be suspended in order to tend to a child's emotional state in an appropriate way. For example, if a child had run away, one would still go look for her, although that is reinforcing inappropriate behavior. This is a very fine line and an essential aspect of the art of behavioral casework. Perhaps R's throwing the card at the worker reflected his belief that the worker would reject him if he failed. Problems do arise in the behavioral approach, especially with children, as the worker must tell the child that the child's behaviors do matter to him (if they do not then, there would be no intervention) and so cannot go beyond Level 3 in the Truax-Carkhoff model which arises out of a commitment to a different approach to change...non directive therapies). Rausch and Bordin (1957) identify three components of warmth: commitment, effort to understand, and spontaneity, which is roughly equivalent to openness and congruence. These are important in a behavioral program which hopes to help the client get in touch with and to deal constructively with his own emotions. The worker throughout the therapy is a model for the client, and must demonstrate for him alternate ways of behaving.

Commitment and limit setting. Commitment may be demonstrated in work with children who often have to test limits physically. Since behavioral programs specify limits (which behaviors will be ignored and which will be punished), the question

of the worker's willingness to enforce them may arise early in the work. Anyone who has worked with children knows that this testing must occur before any meaningful relationship can be established.

The establishment of limits is particularly important for children, who need to know their limits because a very large part of their growth is accomplished by pushing against them. (Combs, Avila & Purkey, 1973, p.218).

This is especially important in working with children whose discipline has been marked by inconsistency. R began to test both the limits and the worker's reaction to his testing almost the day the program began. He would look to see if the worker was watching, hit someone and then demand his star. Generally he wasn't too upset when this was refused in a matter of fact way, with a verbal explanation of what he had done wrong. The really big test came one day when he had been placed in time out and wandered out of the time out area. When he was told to return, he refused and ran toward the door. I stopped him from going out and said that he would have to go to time out. This resulted in physically carrying him back into the area while he kicked and pinched and bit and cried loudly and abusively. This continued to the entertainment of all the passersby in the hall and finally of all his classmates as the bell for dismissal rang. I refused to let R go until he came back into the time out area and quit hitting me. The confrontation lasted over half an hour and was very trying not only

because of the audience, but also because once R stopped assaulting me, he threw himself into a corner and wept loudly, and refusing to let me touch and comfort him. Eventually he returned to the time out area and was told he could go home, but he then had difficulty doing up his zipper. As it was  $-30^{\circ}$ , he could not go until the zipper was done up. He refused my help. This precipitated yet another crisis which was relieved when the janitor offered to help him, and he allowed me to approach him. The ensuing action has already been described on page 220.

From this point on, the work became easier. R appeared to have satisfied himself that I would and could stick to the limits I had set and also that I would not "bail out" on him, even when his behavior was very aversive. He became freer to talk about what made him mad, stopped putting his hands over his ears and refusing to listen, occasionally smiled and chuckled, allowed the worker to pat him on the head and hold his hand and although he still tested, he accepted limits much more easily.

The writer has emphasized the relationship aspects of treatment in this discussion, not because it was absent in work with the other children, but because it has not had ample attention in the behavioral literature. The worker's experience during the practicum has made real the comment that a good helping relationship is a necessary but not sufficient condition for growth.

### Fading

The fading process was accomplished quickly. During April, I decreased the number of hours spent in the classroom from two and a half to one and then the number of days in the school from five to two. During this time, R was often absent when I was present and on some occasions the teacher could not arrange for him to be rewarded outside the class. This was compensated for by letting him stand first in line to go to the gym or to be the first one to be "it" when a game was played. He was also taken to the principal to receive a happy face award on one occasion. Interestingly, his behavior maintained under these conditions, and it was arranged for him to continue to have intermittent access to the Adventure People and punching bag.

### Recording of progress

This was similar to the procedure for W, but Code D replaced Code B (Appendix 3).

### Evaluation of outcome

The first question with which the clinician is concerned is whether there has been any change in the client? If so, what is the direction of the change and has it been clinically significant? Finally, it is hoped that the change can be attributed to the intervention. This last question cannot be addressed in R's case because the baseline was not extended until it was stable, there is no

baseline data from the report, there was only one reliability check (93%) and finally, there was no reversal phase.

However, it was possible to see whether any change had occurred. Figure 9 (page 225) presents the data on appropriate behavior from the report card (which the worker continued to keep although R did not receive it) and from Observation Code D (Appendix 3). Appropriate behavior included: Verbal Positive, Approach and Comply. Visual inspection of data from the observation code was inconclusive. There was some indication of change, in that the level during intervention never was as low as it had been once in baseline. Another hopeful indication was the increase in the average percentage of appropriate behavior over baseline. (Baseline, 78.33%; Phase I, 95.41%; Phase II, 100%; Phase III, 85%; Phase IV, 97.72%; Phase V, 92.43%.)

Report data indicated that that appropriate behavior dropped from Phase II to Phase III and the lower level continued through the first half of Phase IV. From that point it returned to and maintained at the level of the first two phases.

Figure 10 (page 226) presents the results of an analysis of inappropriate behavior when Verbal negative is included as inappropriate, based on Code D. This indicates that inappropriate behavior was declining but it appears to rise again after March 1st, though it does not reach the earlier



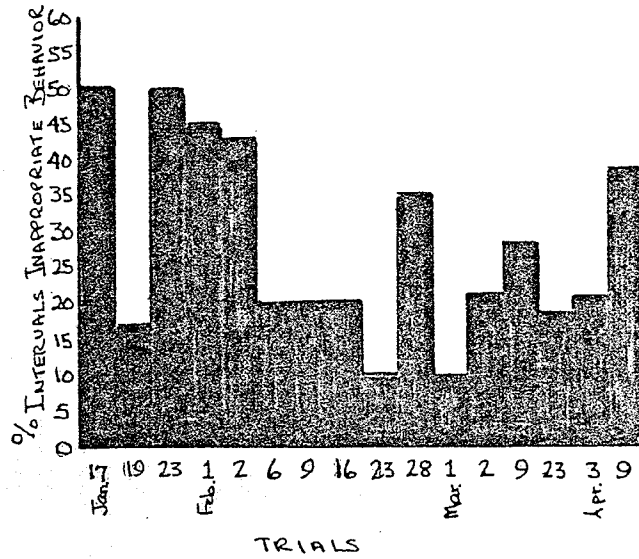


FIG. 10. Percentage of intervals scored for inappropriate behavior when "Verbal Negative" is included. Based on code D.

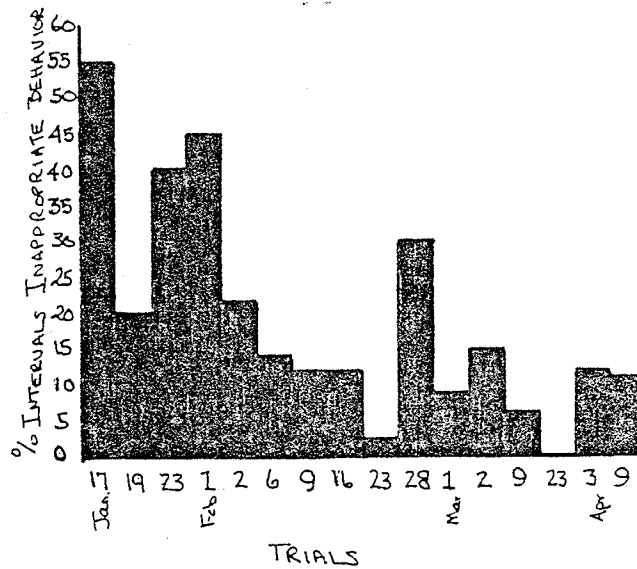


FIG. 11. Percentage of intervals scored for inappropriate behavior when "Verbal Negative" is excluded. Based on code D.

high levels.

Figure 11 (page 226) shows the percentage of inappropriate behavior when the Verbal negative category is excluded (considered to be appropriate). Here there is a clear decline in inappropriate behavior, with the rare spike.

Figure 12 (page 228) represents the percentage of ignoring and withdrawing based again on Code D. It is obvious that there had been a decline in these behaviors; they had almost disappeared; it was a change in the desired direction.

## Discussion

### Data analysis

If the critical behaviors had been clearly established at the outset of the data analysis, it would have been possible to have gone straight to Figure 12. This was not the case, as I had expected the approach would have been the same for both W and R. Only after examination of the data did not "jibe" with my impressions of what seemed to be happening, did the need for further analysis occur. It seemed that R's behavior at this time was more inappropriate than the data showed. This was likely a result of the code allowing two or more appropriate behaviors to be scored during one interval. This gave percentages in excess of 100 and so inflated the levels of "good" behavior. The second analysis (Figure 10) did confirm that it

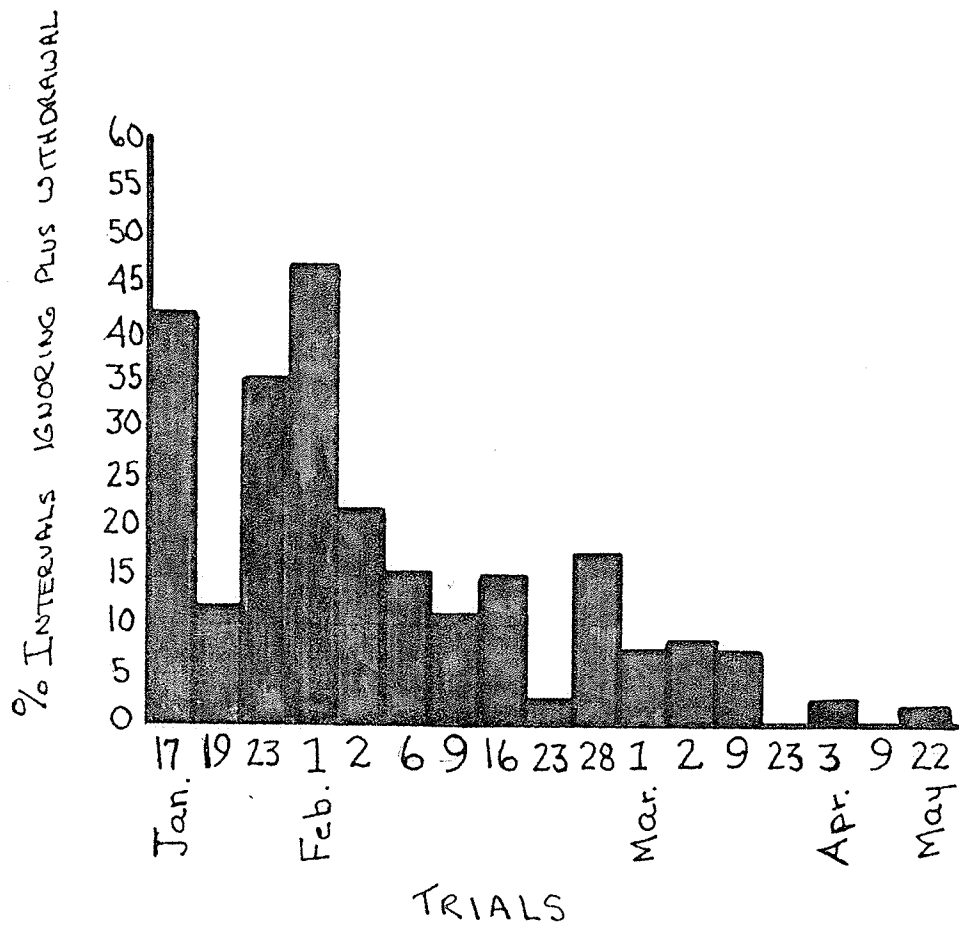


FIG.12. Percentage of intervals scored for ignoring plus withdrawing. Based on code D.

was wrong to assume that the presence of appropriate behavior indicated an absence of "bad" behavior. Inappropriate behavior was on the rise at the same time as "good" behavior. This led to questioning why "bad" behavior was rising and the realization that verbal negative was included in the "bad" behavior category at a time when verbal expression of negative feelings was being encouraged. The next step was to reanalyze the material without the "verbal negative" category and for the first time the data confirmed the impressions of what was occurring. At this time, a re-examination of the goals of the program indicated that the crucial behaviors had been brought under control very quickly, so the remaining targets were ignoring and withdrawing, which were then singled out for analysis.

This should have been indicated when the baseline data showed that the compliant behavior was not particularly low, but having gone through the steps in analyzing W's data, I was blinded by the need to follow established steps. This experience confirms that a behavioral approach is very much an individualized one.

#### Long term goals

Although the data did not provide for measurement of some of the long term goals, there was some indication of change over the three months of work. By making access to the blocks contingent upon completing academic tasks, R did work more. His attention span was such that he was

able to go with the resource teacher on three occasions, both in a group and in individual situations, for testing. These periods took up to half an hour. Because he would respond to questions from the teacher rather than ignoring her, it was possible to assess his number and letter recognition ability and he was given the Sprigle School Readiness Test, on which he scored above average. (This confirms the mother's belief that R is a "smart kid"--a belief certainly not shared by the worker or the teacher after their initial encounters with R.) He had stopped putting his hands over his ears when the worker and teacher talked to him, and on occasion would query the possible outcome of a behavior. He no longer fought in anger, although he still enjoyed the rough and tumble give and take of play fighting.

The behaviors which were ignored had not been extinguished, but did occur less often as he found more appropriate activities to be enjoyable. For example, he usually remained in the group during teaching time although he still moved about. When questioned about the content of the material, he usually knew the answer.

All in all, the worker is encouraged by the changes that have taken place in four months.

#### Recycling the program

Working with R emphasized the value of combining traditional social work skills with behavioral technology to produce change. Having learned while working with W the

importance of monitoring the program and revising it when necessary, the worker expected to have to alter R's program as well. This did not occur in the same way. There was only one change in the criterion level and the interval length and none in the definitions of behavior. The worker had also learned the usefulness of looking for reasons for failure before changing the program.

The few occasions on which the reward was not earned are interesting to explore. On February 2nd R did not come to school until 10:20 after the worker made a home visit to find out why he had not arrived. Appropriate behavior of 46% on that day represents 100% compliance when he was at school, e.g. he did not receive stars for the periods when he was absent, but behaved all the time he was there. February 19th follows two days in which R indicated that he did not want a report card anymore, was a day on which the criterion level was raised, and intervals increased from 10-15 minutes. On February 27th, two things occurred which may in part explain the February 28th achievement. R again said he didn't want a report so was not given one and when he was sent to time out, the English Second Language teacher was working in that area and, not knowing he was being punished, allowed R to join her.

On March 7th, R became the focus of C's affections and he was unable to maintain his compliant behavior in the face of her attention. (The reader will remember that she had a

similar effect on W's behavior.)

The fact that the program was not revised also reflects the short period of time the worker spent with R...a longer intervention would have looked more like W's.

#### Role of "significant others"

The importance of gaining the support of the parent was also underlined. Initially, the work with Mrs. S was most frustrating for both of us. As this resolved and Mrs. S told R that he "should do what Mrs. H said", R became more willing to participate in the work. Without that support, the program might not have changed R at all. Probably much more powerful and even aversive methods might have had to be used.

#### The question of change

The problem of designing a clinical intervention which has internal validity was not solved in any of the work in this practicum. There is also the problem of clinical significance. There is evidence of change but the significance of the change for R's ability to remain within the regular school system is still in doubt. During the last month the worker visited the four grade one classes to find one which might provide the necessary balance of control and freedom, while holding out some expectation that he produce some work. One teacher seemed to offer this and to be sympathetic to the native values the family holds. Placement in her class

was strongly advocated in the worker's final meeting with the principal.

#### Publicizing the work

The question of whether to incorporate any of the work into the written permanent school records arose with each of the children. This was discussed with the parents who preferred that nothing be documented and this wish was respected. The worker believes that labelling should be avoided wherever possible and was comfortable with the parents' decision. At the same time, it is understood that no child proceeds from grade to grade in school to school tabula rosa and the worker did speak with the prospective grade one teacher.

In brief, subjective opinion and such evidence as is available (Figures 12 and 13) indicate change did occur. That change certainly made R happier to be at school and the teacher happier to have him there. However, given the short period of the intervention and the generally inconsistent home, the worker is not optimistic that changes will be maintained. Families such as R's need much more support on both micro and macro levels than is generally available. The hope is that, if R's teacher next year is consistent and understanding, R's gains this year will not have been for naught.

## CHAPTER VIII: CONCLUSIONS

### Original Concerns

In undertaking the practicum, the worker had several anxieties, reservations and just plain questions.

1. Could she learn to use a behavioral approach effectively?
2. Would she be comfortable with an approach which demanded much attention to detail?
3. What would the clients think about this way of working?  
Could their rights be better protected with this method?
4. Would the work be successful in a regular classroom?  
If so, within what parameters?
5. Would it be possible to work effectively within a secondary setting? What clashes would there be between the disciplines and could they be resolved?

### Worker concerns

#### Learning

Eight months of work have only provided the opportunity to explore the tip of the iceberg of behavioral techniques. The programs concentrated on assessment and contingency management. There was little opportunity to systematically alter the stimulus side of the behavioral equation, although there was some. There was no consistent attempt to use cognitive techniques to alter behavior, although again, there was a chance to become acquainted with them. However, in

looking at the children, the worker has seen a change in the desired direction. Recognizing the many possible confounds in attributing the change to the intervention, the worker is nevertheless encouraged to see that change (which is measurable by a concrete standard) has occurred.

There is no question in my mind that behavioral approaches are useful for me as a social worker. The added dimensions of systematic observation and rigorous assessment (and reassessment) are long overdue. The focus on minute details in the client's current life situation in the search for eliciting stimuli and maintaining consequences, provides a structure for interviewing and a focus for the selection of treatment goals.

### Comfort

The use of a contingency program did not impede the development of a positive relationship with the client and the worker never felt like a mechanized reward dispenser. Clearly keeping in view the goals of the program and the methods agreed upon for implementing programs facilitated the work by removing the temptation to meander down interesting bypaths.

The worker welcomes the accountability which is inherent in behavioral casework. Conscientious practise prevents hiding behind vague concepts or jargon, or skipping from goal to goal without discussion with the client's parents. While she retained ultimate responsibility for selection of

treatment methods, she did not have final word on the goals, and the parents felt free to challenge the worker's view of what was going on. Data were available to support the worker's stance, and this was a pleasant discovery.

There was never any feeling that the approach would be successful unless the uniqueness of each child was respected. In fact the careful assessment pointed up the differences in each child. The need to be sensitive to thoughts and feelings has been mentioned.

In sum, the process of the work eliminated fears that the social learning approach would be unfeeling. This is not to say there is no danger of that occurring. However, it seems doubtful that such an approach would be helpful to the client. Hopefully, the lack of progress would signal the need to revise strategy.

Client's perception of the intervention

#### The parents

It was pleasant, as well as frustrating and challenging, to work with parents of the children in a way which completely de-mystified the process of changing their children's behavior. The parents were quickly able to understand the thrust of the intervention. The reasoning behind a learning based approach seemed to make sense to them. It dealt with concrete problems in concrete ways. The goals were clearly specified and the parents were encouraged to challenge the validity of both the goals and the methods. This served to

place upon the parents some responsibility for making decisions which were crucial in the child's life. It helped them believe that the worker was not operating as THE authority about their child and produced an equalitarian relationship which was helpful to the work. The parents did appreciate that there was no effort to involve the whole family in lengthy therapy sessions. At time we did have to talk about how they might have to change their ways of handling the children, but there was no attempt to restructure the entire family. This was also appreciated.

#### The children

The children who were clients in this practicum were as happy about the work as any other children the worker had helped using other social work methods. For children who are not used to consistency, the clear limits imposed by a contingency program are initially extremely frustrating. The need to test them is acute. Once that phase is past the worker believes they gain some comfort from a clear understanding of "what" happens "why" in part of their small world. The danger is in doggedly enforcing contingencies in the face of apparent emotional need. This can be avoided if the worker develops a program which takes into account and deals with the thoughts and feelings of the child, which may not be directly observable, but which may be inferred from a careful look at the sequences of behaviors. Such a position may be anathema to the skeptics of cognitive behaviorism

(see Rachlin, 1977). The writer would be the first to admit that attending to a child's temper tantrum might well initially reinforce it, but would argue that if the attention results in a clearer understanding of what provoked the anger, the treatment program is in the final analysis advanced.

#### Applicability within the regular classroom

I am pessimistic about the generalization of my experience to classrooms staffed by one teacher even with the help of a teacher's aide. Rigorous assessment and consistent contingency management require concentration and ability to move into a situation quickly and quietly. This would just not be possible where the pupil ratio is twenty-one to one. (The situation may be more hopeful where children are older and more confined to sitting in desks and more able to work independently.) With the best intentions in the world the teacher in Class B found it difficult to track and consequate behavior when the worker was away. It was also difficult to remember which behaviors were to be rewarded and which ignored. The teacher in Class A had some difficulty specifying the behavior she desired and attending to that behavior while ignoring other behaviors. The difficulty inherent in asking the teacher to run the program has received wide attention and has already been mentioned.

The teacher's aide could conceivably be trained as a

behavior modifier if the teacher agreed to relieve her of preparation duties and allowed her to do most of the teaching of the targetted children. It is not possible for the student teachers to assume the role as they are only present one day per six day cycle.

It may be possible for the teachers to use much softer methods of assessment...e.g. rating a child's disruptive behavior on a scale of 1-10 at the end of each period, or making concise notes at the end of the day, or taking a small sample of behavior and counting the outbursts. These may be profitable, but still require extra time and attention during already harrassed days.

Another alternative is for the school social worker to run the program. This would be possible if she were in only one or two schools, but the general experience is that the worker is required to put in an appearance at several schools in her area. Even if, by dint of clever caseload management, she is able to work intensively with five or six children, observing them regularly and beginning the program of rewards or punishment, she would have to rely on the teacher to eventually assume responsibility. At that point it is essential to ask the least possible effort from the teacher which ensures maintenance of the behavior. Presumably the teacher's willingness to do this will depend a great deal on her sense that the effort will be worthwhile. Another factor will be her comfort in using tangible rewards when necessary. (The writer doubts that behavioral approaches

in the classroom by social workers and psychologists in Winnipeg have produced such startling success at such low response cost that many teachers would be eager to embark on a program.) The challenge to believers in behavioral approaches is to develop programs which require minimal input from teachers, maximal effort from the behaviorist, and maximal demonstration of improvement in the child. As a result of this practicum the worker would approach the problem in the following manner.

Assuming that the worker is familiar with several behavioral approaches, and has chosen reasonable goals, parameters which would facilitate success are:

1. Teacher willingness to cooperate and comfort with behavioral precepts, particularly the use of rewards.
2. Cooperation of other staff in the room.
3. Presence in the room of an adult who can be trained to consequence behavior consistently in the worker's absence.
4. Availability of rewards which are attractive enough to incite change.
5. The use of the least powerful intervention which ensure success.
6. Clearly defined and communicated target behaviors and goals.
7. A classroom with four enclosing walls.
8. Interpretation of the program to the other children in the class so their support can be enlisted.

9. The worker must have a block of time in which she can be continually present in the classroom at the beginning of the program to either run it herself or closely supervise program managers. This must be followed by routine visits to reassess and revise the program.
10. A good relationship among the child, and the teacher and the program managers.
11. Moral support and consent from the child's parents.
12. A built in program for maintenance of the newly performed behaviors.
13. The child's willingness to cooperate.

Unless these conditions are met, I would be most hesitant to suggest that the behavioral approach to altering classroom behavior be tried.

#### Working in a secondary setting

Working independently of agency auspices did present difficulties...e.g. whether discussion with other professionals in the school did in fact constitute a breach of confidence, whether the worker was covered by insurance when transporting children in her private car, whether the work with a child had to become part of a school record. These situations would have been clarified if I had been employed by an agency.

Enough cannot be said about the help and aid received from the staff of the school, particularly from the principal who never hesitated to do what appeared necessary to

help a child, and who did not panic when one mother began to question, rightfully, an action which she considered a breach of confidence. This luxury is not always present.

There were certainly differences of emphasis which had to be reconciled through discussion. Occasionally the worker feared she was being coopted into the educational value system. However she did try to affirm the rights of the parents to protect their child's cultural values in the face of an encroaching white "middle class" school system. She was concerned to interpret to the teachers the life experience of the child and the socioeconomic constraints families may face in adopting middle class values. She felt throughout that the children might have been allowed more physical freedom (in the gymnasium especially). There were problems when as the programs progressed, the children came to relate primarily to the worker, instead of the teacher, who worried about how she would maintain control after the worker left. There was a problem when the other children felt left out as they did not have access to the Adventure People and one little boy did try to behave badly so he could play with us. I would like to have asked other staff members what they thought was going on as they passed me each day, crouched in the hall, playing with two children and a bunch of toys!

In sum, the conditions for the practicum were optimum. The worker would be leery of beginning this method in a

less open environment unless a great deal of preparatory work had been done. One regret was that there did not seem to be enough time (or courage) to engage the teachers in continuing dialogue about their experience in the practicum. An evaluation interview was held a month after the worker left, but continuing formal assessment would have been more helpful.

In this interview the teachers said they thought they had learned some of the basic principles of behavioral intervention. They appreciated the demonstration of consistency and specificity in work with children. They thought they would use some of the methods they had seen--particularly ignoring, praising appropriate behavior, and beginning with small, specific goals, rather than global ones. They did not think they would tackle changing children like W, R or A on their own. One teacher commented that she was frustrated when discussions with the worker impinged on preparation time, and that she found the presence of observers distracting. On the whole, though, they were positive about their participation in the practicum.

#### Last thoughts

The work of social work is change. The target of the change may be the environment (physical, cultural, or political) or the family or the individual, and this practicum has been addressing the individual. In the past I had experienced considerable frustration with the imprecise way in

which the steps in the "dance of change" were described. Psychoanalysts had favored the "follow the leader" approach, while humanists urged "go with the flow" and "dance to your own drum", but efforts to identify a social work parallel to "left, right, left, right, left" lacked precision and consensus.

Social learning theory has begun to identify specific steps in the dance. It also suggests the sequence needed to successfully complete it. They are complex...the dance becomes a carefully choreographed ballet. Art is achieved through grounding in fundamentals.

Through the course of an investigation into how change occurs, I came to believe that it too is built on small increments. As the first tentative step is rewarded, courage for the next step results.

Behaviorists advocate this approach to change. Attention is paid to building the basis for new ways of behaving... if one metaphorically falls on his face he is encouraged to "pick yourself up, brush yourself off and start all over again" to see where he went wrong. There is an inherent sense of order. The initial terror for me was that order might preclude art. Happily, this was not my experience. I found that the behavioral approach not only provided room for creativity, but in fact it provided a solid base of competence from which creativity and sensitivity can develop. Nor did I find that I was "locked into" going through the same steps

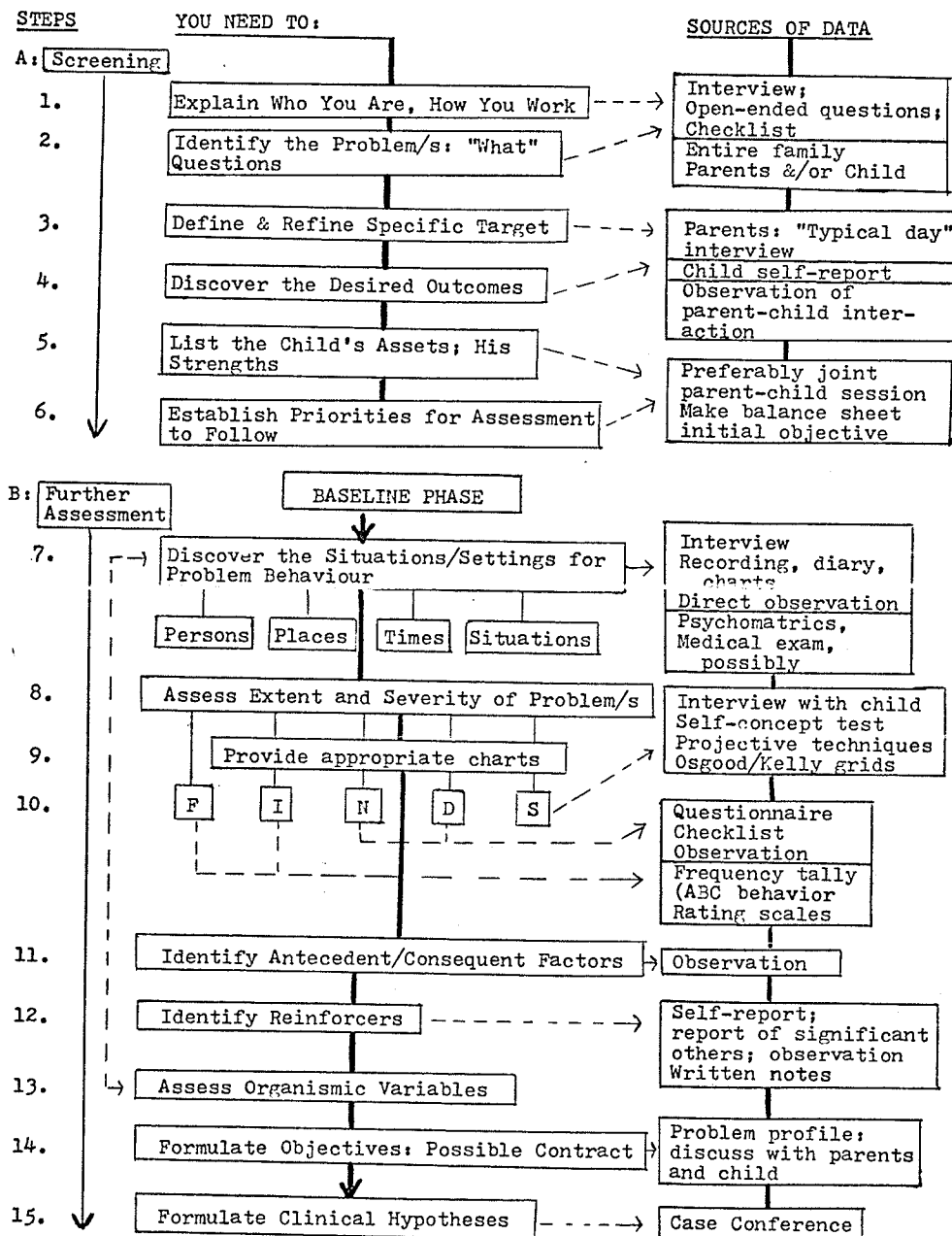
regardless of my partner. That there was an advantage to tailoring my steps to the desires and needs of the individual children was clear. In fact, I was pleased to find some of the steps from the humanist dance could be incorporated into the process.

In short, my experience in the practicum suggests that behavioral casework, which recognizes the importance of biological ability, as well as current thoughts and feelings, and which adds a careful description of steps in treatment has the potential to produce a dance of change which is not only effective but is also artistic. And the dance goes on.

APPENDIX 1

Flow Chart: 15 Steps for Producing  
Problem Profile &  
Clinical Formulation

- 2 weeks -

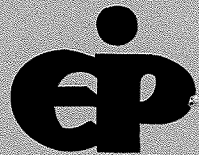


From Workshop at University of Manitoba May, 1979:  
The Conduct Disordered Child, Dr. M. Herbert.

APPENDIX 2

SEP 27 1977

THE WINNIPEG SCHOOL DIVISION NO. 1



**EARLY IDENTIFICATION PROGRAM**

**HANDBOOK**

September, 1977

## C O N T E N T S

1. **Early Identification Program and Screening Components**
2. **Suggested Time Line**
3. **Application for Admission to Kindergarten**
4. **Application for Admission (blue form)**
5. **School Entrance Health Record**
6. **Guidelines for Initial Parent Interview**
7. **Sprigle School Readiness Screening Test (SSRST) 1965**
8. **Screening for Gross Motor**
9. **Speech and Language Rating Scale and Guide**
10. **Useful Guide for Referral of Speech Problems**
11. **Early Identification Program - Data Sheet and E.I.P. Scoring Guide**
12. **Evaluation Guide for Mid Year Recording (to be revised)**
13. **Early Identification Program Organization and Suggested Times and Agenda for Review Team Meetings**

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## EARLY IDENTIFICATION PROGRAM

The goal of the Early Identification Program is:-

- (a) to implement a comprehensive screening program for kindergarten children in the Winnipeg School Division No. 1.
- (b) to identify the strengths and areas of difficulty of children when they enter school.
- (c) to provide appropriate services and programs to meet the needs of these children.
- (d) to provide support programs for parents and school personnel.

The Early Identification Program accepts the premise that the earlier one can provide help, the earlier are the opportunities for the child to function better intellectually, emotionally, socially and physically. We are not labelling but attempting to understand the needs of the child.

There is a need to understand the "whole" child. Past screening has dealt with "pieces" of the child, i.e. fragmented information from many sources with no easy access to look at the total picture, or share information.

Each school has a review team composed of the kindergarten teacher, the public health nurse, the resource teacher, the principal education resource person, child guidance clinic personnel, and input from area consultants. The review teams meet throughout the year to co-ordinate results of screening and plan and ensure follow-up for the needs of the "total" child.

### SCREENING PROGRAM COMPONENTS

Phase	Personnel	Instrument	
Parent Interview	Kindergarten Teacher	Suggested Guidelines	
School Readiness	Resource Teacher	Sprigle School Readiness Test	
Vision	Nurses	Random Dot E	
Hearing	a) Nurses b) Volunteer Nurses	Audiometer Impedance Meter Otoscope	
Speech and Language	Kindergarten Teacher)	Observation and	
Social, Emotional	Kindergarten Teacher)	Rating forms	
Physical: As needed on basis of health information and observation.			
Gross Motor	Physical Education Resource People	Tasks involving motor development	October

**SPRIGLE SCHOOL READINESS TEST** — for children ages 4½ to 6½ years. It has been used for some time by the Child Development Clinic. It was designed to be easily administered and to achieve as much objectivity as possible. It provides information as to a child's readiness to handle learning demands in school by sampling abilities in a range of activities.

## SUGGESTED TIME LINE GUIDE

Refer to E.I.P. Scoring Guide (on back of data sheet) for further information.

### 1st Week of School or earlier

Application for admission to Kindergarten (optional)  
 Application for admission (blue form) (nurse)  
 City Health Department School Entrance Health Record (doctor)  
 Parent Interview

### Personnel Responsible

### September

Initial Meeting of Total Review Team to:  
 - set dates for future review team meetings and assign responsibilities  
 - see "E.I.P. Organization"

Chairperson,  
Review Team

### September/October

Sprigle  
 Gross Motor  
  
 Random Dot E  
 Octoscope  
 Audiometer (may be delayed subject to availability)  
 Impedance (may be delayed subject to availability)

Resource Teacher  
 Physical Education  
 Resource  
 Public Health Nurse  
 Public Health Nurse  
 Public Health Nurse  
 Volunteer Nurse trained by C.G.C.

### October/November

Speech and Language  
 Complete Section "A" data sheets  
 2nd Meeting of Total Team (consider Section "A" results and complete Section "B")

Kindergarten Teacher  
 Kindergarten Teacher or delegate  
 Chairperson,  
 Review Team

### January/February

Mid Year Evaluation - complete data sheet Section "C"  
 Re-tests - only if considered necessary by school Review Team

Kindergarten Teacher

### March

3rd Meeting Total Review Team - Evaluate Follow-up and complete data sheet Section "D"

Total Review Team

### End of May

Final Meeting - Total Review Team and Receiving Teachers to:  
 consider relevant information on data sheet with receiving teacher  
 complete data sheet Section "E"  
 return completed yellow data sheets to Area Steering Committee

**RANDOM DOT E --**

This test permits rapid screening for finding defects in binocular vision. It is simple in concept and easily administered.

**OTOSCOPIC TESTING --**

Permits inspection of ear canal and eardrum to assure that the canal is free from obstruction (i.e. impacted wax or foreign bodies) which would interfere with impedance testing. It can permit the nurse to identify gross abnormalities of the eardrum or obvious infection.

**IMPEDANCE TESTING --**

provides useful information regarding the functioning of the middle ear system in the transmission of sound.

- Measures middle ear air pressure
- Tests eardrum under varying externally controlled pressure conditions
- Checks absence of presence of middle ear muscle reflex
- Can detect eardrum perforations

**AUDIOMETRIC TESTING --**

can identify possible hearing impairment. Permits a quick check on hearing sensitivity for both ears.

**SPEECH AND LANGUAGE --**

Information will be obtained as follows:

1. Questionnaire - parents  
Interview by kindergarten teachers - clarify questionnaire  
Interview by kindergarten teachers - add information
2. Sprigle - Observations and language items
3. Kindergarten Evaluation in November and have added Rating Scale of Speech and Language to be completed by the kindergarten teachers

Permission will have to be obtained for reproduction.

**SOCIAL, EMOTIONAL --**

Information will be obtained by the Kindergarten Teachers through observation and completion of rating forms, or by parent interviews.

**GROSS MOTOR --**

Gross motor consultants assess areas of strength or difficulty in gross motor development through a variety of activities.

Superintendent's Department

(optional)

Application for Admission to Kindergarten  
(Information for the Kindergarten Teacher)

Date \_\_\_\_\_

Application for admission to the \_\_\_\_\_ School on (date) \_\_\_\_\_

Name of Child \_\_\_\_\_  
(Family Name) (Given Names - underline one used)

Date of Birth \_\_\_\_\_ Boy \_\_\_\_\_ Girl \_\_\_\_\_  
(Day) (Month) (Year)

Has Birth Certificate, as required, been presented with this application? Yes \_\_\_\_\_ No \_\_\_\_\_

Address \_\_\_\_\_ Telephone \_\_\_\_\_

Child's daytime address (if different) \_\_\_\_\_ Telephone \_\_\_\_\_

Person at daytime address \_\_\_\_\_

FATHER

MOTHER

Name \_\_\_\_\_ Name \_\_\_\_\_

Occupation \_\_\_\_\_ Occupation \_\_\_\_\_

Business Telephone \_\_\_\_\_ Business Telephone \_\_\_\_\_

Guardian (if not the parent) \_\_\_\_\_

Language(s) spoken at home \_\_\_\_\_

Information about brothers and sisters (if any):

NAME	AGE	SCHOOL	GRADE
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

Other members of the household \_\_\_\_\_

Has your child attended any Nursery School or Centre or other Kindergarten? \_\_\_\_\_

Does your child have any allergies? \_\_\_\_\_

Does your child have any nervous disorders? \_\_\_\_\_

Is your child required to take medication? \_\_\_\_\_

Does your child have any other physical problems of which the teacher should be aware? \_\_\_\_\_

Is your child able to go to and from school alone? \_\_\_\_\_

If not, what provisions are you making for him? \_\_\_\_\_

Permission for field trips — Signature \_\_\_\_\_

Please add any further information about your child which you think would be helpful to the teacher.





## SUGGESTIONS FOR THE USE OF THE GUIDELINES FOR INITIAL PARENT INTERVIEW FORM

The questions listed on the Initial Parent Interview Form are intended only as guidelines to be used as the teacher deems appropriate or useful.

Space has been provided to add any additional questions which an individual teacher considers pertinent.

It is hoped that these guidelines will help you achieve:

- a good rapport with parent and child
- beginning understanding of the child and his, her needs
- an atmosphere where child and parent feel comfortable with the teacher and in the school setting

## GUIDELINES FOR INITIAL PARENT INTERVIEW — E.I.P.

The questions listed on the Initial Parent Interview Form are intended only as guidelines to be used as the teacher deems appropriate or useful.

Child's Name \_\_\_\_\_

Date \_\_\_\_\_ Birthdate \_\_\_\_\_

Person(s) Interviewed:    Mother \_\_\_\_\_    Father \_\_\_\_\_    Other(s) \_\_\_\_\_

1.    How does your child feel about coming to school?

Has your child been a member of a group? e.g. nursery school, etc.?

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2.    What activities does your child enjoy?

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3.    Who are his/her favorite companions - own age group, older, younger or adults? How does he/she get along with them?

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4.    Does your child like to play alone at times?

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5.    Does your child enjoy listening to stories?

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6.    What are your child's favorite T.V. programs?

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-2-

7. Is your child particularly sensitive? (e.g. feelings easily hurt, afraid of making mistakes, etc.)

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8. Does your child have any fears which would be helpful for me (the teacher) to be aware of? (e.g. dogs, thunder storms, lightning, etc.)

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9. Is there anything further which would be helpful for me to know about your child?

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Additional questions: (Space has been provided to add any questions which the teacher considers pertinent.)

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**TEACHER OBSERVATIONS ON INTERVIEW:**

(e.g. parent-child relationship, child's behaviour, parent interest in volunteering, supervising on field trips, etc.)

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## TEST: Sprigle School Readiness Screening Test (SSRST), 1965.

**DESCRIPTION:** The test was specifically designed as a tool to help the physician in making a quick assessment of young children's mental abilities with reference to readiness for school. In designing the test, Sprigle had the following three criteria in mind: 1) It had to be brief without sacrificing reliability and validity, 2) It had to be easily administered and scored, and 3) the interpretation by the physician to be parents had to be objective and concise. The author emphasizes that it is only a screening test and that a detailed analysis of the child's development would require more intensive psychological testing.

The test contains 34 items, divided into two broad sections, verbal and nonverbal. These items cover nine areas - verbal comprehension, awareness of numbers, comprehension of analogies, information, vocabulary and ability in spatial relationships. Materials and instructions are of the nature which would enhance subject cooperation and understanding, and would promote scoring objectivity. The standardization sample used 575 randomly selected children from kindergarten and day nurseries.

**SCORING:** After the administration of the test which takes between 8 to 12 minutes, a score is obtained which according to the norms, places the child into one of 4 levels of readiness: Not ready, questionable, average to above average, and accelerated.

The manual, as a guide for a doctor or nurse is well prepared concerning administration, scoring and interpretation of scores. Interpretation of scores is clearly spelled out to prevent broader interpretation than the test warrants.

Although tables are presented which give SSRST scores and corresponding ranges of IQ scores for the different age groups, the author clearly and frequently says that they are presented solely to give the physician some idea of the scores that fall within the developmental levels the test is designed to identify. He states unequivocally that the IQ score is not to be affixed or reported.

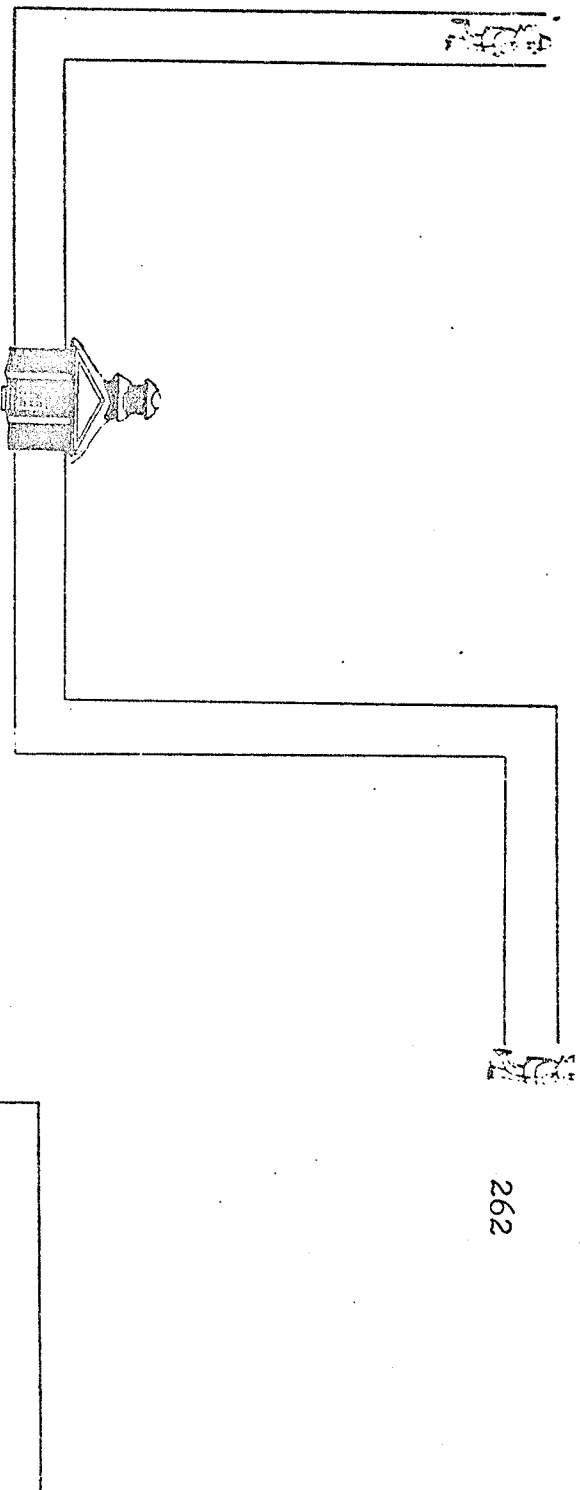
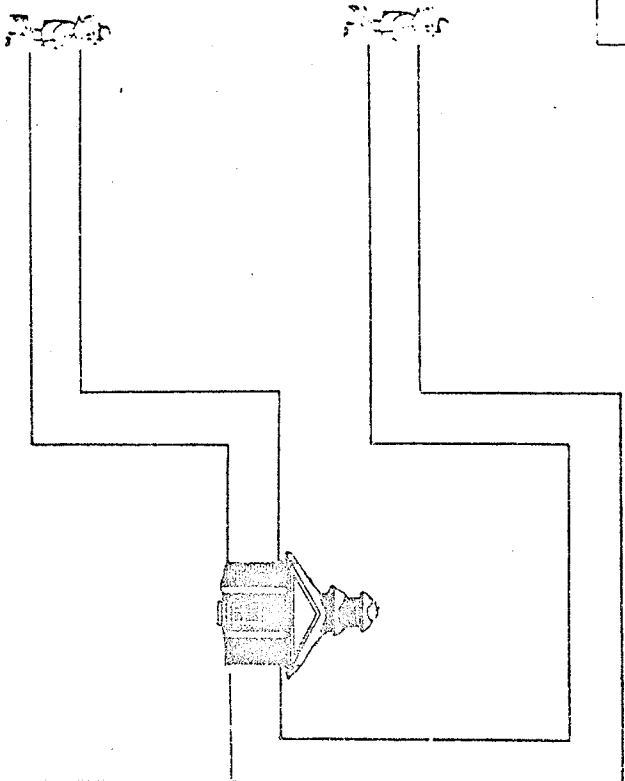
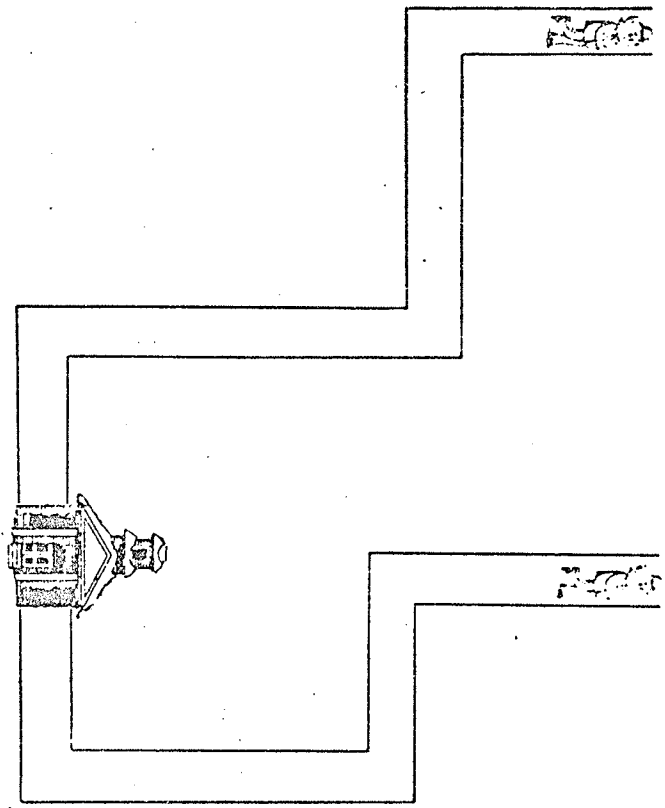
**RELIABILITY:** Test - retest reliability based on 30 randomly selected cases (out of 575) retested after one week by different examiners yielded a coefficient of .96.

**VALIDITY:** Concurrent validity in which the Stanford Binet Intelligence Scale, the Metropolitan Readiness Tests and the Gates Primary Reading Tests were used as criteria, yielded the following scores: 1) correlations with the Stanford Binet at all age levels - .95 or .96, and 2) correlations with the MRT and GPRT range from .78 to .92.

**REVIEWS:** There were two reviews of this test in *Buros*, both of which were quite favourable. The first reviewer noted that additional information is necessary for an adequate assessment of the SSRST as a measure of mental abilities. He notes there is no information on test construction given and also no means or standard deviations provided.

He comments that the validity scores are high, considering the number of test items and the fact that the age range of each sample is 6 months. He would like a replication of the correlations with the Stanford Binet and SSRST with a new sample, because the Binet has a reliability in the range of .83 - .91 at age 5.

The second reviewer noted the following: The test is apparently based on sound understanding of the cognitive skills required for academic learning in the primary grades and is constructed with appropriate attention to professional standards of scientific reliability and validity. For the screening purpose, for which it was devised, it is clearly useful and appropriate to assess cognitive readiness for schools, particularly readiness to learn to read. In making recommendations for individual children, the assessment of cognitive readiness for school needs to be integrated with knowledge of the child's social, physical and emotional readiness.



## Steps 1 to 4

Picture cards, score + for correct, — for failure

Item	Child's Answer	Correct Answer*
<b>Step 1</b>	<b>Sample A</b>	<b>(Not Scored)</b>
1.	( )	(2)
2.	( )	(3)
3.	( )	(1)
<b>Step 2</b>	<b>Sample B</b>	<b>(Not Scored)</b>
4.	( )	(3)
5.	( )	(1)
6.	( )	(2)
7.	( )	(3)
<b>Step 3</b>	<b>Sample C</b>	<b>(Not Scored)</b>
8.	( )	(1)
9.	( )	(5)
10.	( )	(4)
11.	( )	(2)
12.	( )	(4)
<b>Step 4</b>	<b>Sample D</b>	<b>(Not Scored)</b>
13.	( )	(4)
14.	( )	(3)
15.	( )	(2)

If all 15 correct, add 1 point

## Step 5

Numbers score + or — (only 1 point, see scoring directions)

6 ( )

8 ( )

10 ( )

## Step 6

Information - record what child says

1. What does mummy cook on?
2. How many legs does a horse have?
3. How many toes do we have on one foot?
4. Name for me the days of the week.

## Step 7

Analogies - record what child says

1. We sit on a chair, we sleep on a \_\_\_\_\_
2. A deer is fast, a snail is \_\_\_\_\_
3. Candy is sweet, lemons are \_\_\_\_\_
4. Steel is heavy, cotton is \_\_\_\_\_

## Step 8

Vocabulary - record what child says

1. Apple
2. Feather
3. Lantern
4. Pen
5. Nuisance

## Step 9

Spatial Relations, score + or — (only 1 point, see scoring instructions)

1. ( ) 2. ( ) 3. ( )

Total Score \_\_\_\_\_

## SCREENING FOR GROSS MOTOR

Screening is a quick method used to see a large number of children in a short time period. Screening 'weeds out' those children who are having difficulties so that a more detailed test can be given to those children deemed at risk. Screening can be done either in the classroom or in the gym. Three stations are used.

### 1. Balance

Here the child is asked to walk forward and backward on a 10 foot line, one foot directly behind or in front. The tester watches:

- ability to place feet directly in front or behind and maintain balance
- falling sideways
- little extraneous arm movement
- does not step off line or fall sideways

### 2. Eye-Hand Coordination

Here the child catches a playground ball bounced to him 10-15 feet away. The ball is bounced to the left and right side above eye level and then directly in front. The same procedure as above is used without bouncing the ball. The tester watches:

- ability to track, i.e. follow the path of the ball with both eyes
- catching pattern
  - does not scoop up the ball
  - fingers are not stiff, no poking at the ball
  - timing - child can determine when to place hands around the ball

### 3. Hopping

Here the child hops on two feet and then on the left and right foot for a distance of about 20 feet. The tester watches:

- ability to keep both feet together in an even rhythmic pattern
- ability to remain on one foot without putting the other foot down or changing feet

Here is a simple outline that can be used:

#### Balance

#### Hopping

#### Eye-Hand Coordination

Name		Balance		Hopping			Eye-Hand Coordination	
		Forward	Backward	Both	Left	Right	Tracking	Catching
Sally S.	F							
Jimmy J.	F							
Susy B.	P							
Billy T.	F							
Jill H.	F							

**Individual tests needed:**

1. Jimmy - Balance, hopping
2. Susy - Eye-hand
3. Jill - Hopping, eye-hand

**At Risk:**

1. Billy - Hopping

**Eye-hand** - most important item - tracking

**Hopping** - easiest \_\_\_\_\_ hardest  
 two foot; dominant foot to non-dominant foot

**Individual Testing****Major Areas Tested:**

1. Body Parts and Planes - This is to see if the child is aware of different parts, their symmetry and names.
2. Knowledge of L. R. - See if the child is aware that there are two sides of the body.
3. Spatial directions - Child can demonstrate the understanding of direction by placing himself in relation to static object.
4. Static balance - Child demonstrates control over center of gravity. Balance usually needed before good dynamic balance is established.
5. Dynamic balance - line  
 hopping  
 locomotor patterns  
 (all means of determining if the child can control his body in space using a variety of ways of moving. Also shows what stage of development.)

## SPEECH AND LANGUAGE RATING SCALE

Name \_\_\_\_\_ Sex \_\_\_\_\_ Birthdate \_\_\_\_\_  
 Address \_\_\_\_\_ Phone \_\_\_\_\_  
 School \_\_\_\_\_ Grade \_\_\_\_\_  
 Date of Rating \_\_\_\_\_ Rater's Name \_\_\_\_\_

Below is a series of statements which describe a child's listening and speaking skills in the classroom. Please evaluate the child as objectively as possible. Place the number of the description for this child to the right of each statement.

- 1) Above Average                      2) Average  
 3) Below Average                      4) Poor

- |                  |  |  |                         |
|------------------|--|--|-------------------------|
| 1. Above Average | 2. Should progress with classroom speech and language improvement activities | 3. Teacher observation. Consider for possible referral | 4. Refer for assessment |
|------------------|--|--|-------------------------|

### AUDITORY COMPREHENSION AND LISTENING

1. Ability to focus attention. \_\_\_\_\_
2. Ability to follow oral directions in the classroom. \_\_\_\_\_
3. Listens to class discussions or stories and comprehends the subject matter. \_\_\_\_\_
4. Ability to retain information that he hears. \_\_\_\_\_
5. Comprehension of word meanings at his grade level. \_\_\_\_\_

### SPOKEN LANGUAGE

6. Ability to speak in complete sentences using good sentence structure. \_\_\_\_\_
7. Ability to use vocabulary appropriate for his age level. \_\_\_\_\_
8. Ability to produce speech sounds. \_\_\_\_\_
9. Ability to recall words he desires to use. \_\_\_\_\_
10. Ability to tell stories or relate incidences with ideas in good sequence. \_\_\_\_\_

## GUIDE FOR SPEECH AND LANGUAGE RATING SCALE

### Auditory Comprehension and Listening

#### 1. Ability to focus attention

1	2	3	4
above average ability to focus and maintain attention.	generally able to focus attention on activities as required.	short attention span but when highly motivated can attend.	unable to attend or focus on activities

#### 2. Ability to follow oral directions in the classroom

remembers and follows extended directions.	follows directions that are familiar and/or not too complex.	usually follows simple oral directions but often needs individual help.	always confused; cannot or is unable to follow directions.
--	--	---	--

#### 3. Listens to class discussions and comprehends the subject matter

understands and benefits from discussions.	listens well and can follow simple discussions.	listens but rarely participates; mind often wanders from discussion.	always inattentive and/or unable to follow and understand discussions.
--	---	--	--

#### 4. Ability to retain information that he hears

usually remembers procedures and info from numerous sources; good immediate and delayed recall	average retention of basic materials; adequate memory	retains simple and often repeated ideas and or procedures.	almost total lack of recall; poor memory.
--	---	--	---

#### 5. Comprehension of word meanings at his grade level

understands all grade level vocabulary and some higher level word meanings.	good grasp of grade level vocabulary.	sometimes fails to grasp simple word meanings; misunderstands many grade level words.	extremely immature level of understanding.
---	---------------------------------------	---	--

## Spoken Language

### 6. Ability to speak in complete sentences using good sentence structure

above average oral language; rarely makes grammatical errors in his oral sentences.	usually uses correct grammar in his oral language; has few errors of omission or incorrect use of prepositions, verb tense, pronouns, etc.	frequently uses incomplete and/or numerous grammatical errors.	always uses incomplete sentences with grammatical errors.
---	--	--	---

### 7. Ability to use vocabulary appropriate for his age level

adequate vocabulary; above average vocabulary; uses numerous precise, descriptive words.	has an adequate vocabulary appropriate for his age.	always uses and has a limited vocabulary which includes primarily simple, concrete nouns with few precise, descriptive words.	always uses an immature vocabulary.
--	---	---	-------------------------------------

### 8. Ability to produce speech sounds

above average ability to say words clearly.	speaks clearly; is easily understood; any errors in sounds are normal for his age	a number of sounds are not produced correctly; sometimes difficult to comprehend.	unintelligible speech.
---	---	---	------------------------

### 9. Ability to recall words he desires to use

above average ability to speak fluently; rarely hesitates on a word.	usually speaks fluently and accurately; occasionally has to search for "correct word".	often has to grope for words to express himself.	unable to call forth the exact words he wishes.
--	--	--	---

### 10. Ability to tell stories and relate incidences with ideas in good sequence

above average; uses logical sequence.	average ability to tell stories.	has difficulty relating ideas in logical sequence.	unable to tell a comprehensible story.
---------------------------------------	----------------------------------	--	--

## WHEN TO REFER

### Useful Guide for Referral of Speech Problems:

#### ARTICULATION:

1. Can the child imitate the defective sound in isolation? e.g. "Say 'sss' like this with your teeth together". Under 8, this is a positive sign, and you may not need to refer.
2. Is the error inconsistent? i.e. does he sometimes say a correct 's' in speech, or say it correctly in certain words or position in words? If so, you may not need to refer.
3. Is he over 8? Most articulation difficulties should have passed by this age. Refer the child who is over 8.
4. Does he seem to have poor coordination of oral musculature - protruding teeth, etc.? If so, he'll often have speech problems, and you should refer.
5. Sensitivity re speech problem (THIS APPLIES TO ALL COMMUNICATION PROBLEMS). If you feel a child is sensitive about his speech - refer. Children may often have what appears to be a very minor speech problem - but to the child it is a definite problem, socially and/or emotionally.
6. Self-correction: Does he show any attempt to self-correct? If so, you can probably wait on referral.
7. Number of errors in speech: If there are more than 2 or 3, it will probably need referral.
8. If child is unintelligible - REFER IMMEDIATELY.

#### LANGUAGE

1. Non-talkers - Discuss with school contact person from C.G.C. unit or request consultation with speech and hearing clinician
2. If oral communication is at a minimum - single words, uses a lot of gesture, mixes 2 languages, "immature" grammar, seems bright, but can't express himself orally, etc.
3. Poor vocabulary, poor concept development, poor reasoning, lack of imaginative thinking, inability to follow instructions.

#### VOICE

1. Voice disorder noticeable and has persisted for some time.
2. Child is being teased or is withdrawing.
3. Child frequently "loses" voice.

#### FLUENCY

1. If parent is anxious: therapy may consist of parent counselling or teacher information to prevent stuttering.
2. ALWAYS REFER STUTTERERS: if they are beyond the normal non-fluency stage. It is much easier to deal with stutterers early or prevent the problem. NOTE: Stutterers may conceal the problem by avoiding talking!

**WHEN IN DOUBT ABOUT WHETHER TO REFER, ASK THE SPEECH THERAPIST IN YOUR SCHOOL!**



E.I.P. SCORING GUIDE

Refer to Time Line Guide for further information.

Use "S" for satisfactory, "R" for review unless otherside noted. Enter the DATE of all tests.

SECTION AStudent Transferred

- I - Contact the previous school for E.I.P. information if available
- O - Fill in comment 4, section D or E and check ( ) final column to indicate that information has been forwarded.

Language Spoken

- E - The child's first language is English
- O - The child's first language is other than English

Preferred Hand

- 1 - left hand is dominant
- 2 - Right hand is dominant
- 0 - Dominant handedness has not been established

Sprigle

Record raw scores and below each Record "S" or "R"

S - 16 points and over

R - 15 points and under

Example

	12	
	R	
	17	
	S	

Speech and Language

Refer to Speech and Language Rating Scale

Comprehension (Auditory Comprehension and Listening)

S - If all of the 5 items are graded "above average" or "average"

R - If any item is graded "below average" "poor"

Spoken (Spoken Language)

S - If all of the items (6-10) are graded "above average" or "average"

R - If any item is graded "below average" or "poor"

Gross Motor

The Area Physical Education Resource person will enter "S" or "R" based on a scoring of Balance, Hopping and Eye-Hand Coordination.

Random Dot E

Otosopic

Audiometric

Impedance

The school nurse will prepare the notation "S" or "R" for each student

SECTION CGUIDE FOR KINDERGARTEN MID-YEAR RECORDINGPhysical (Growth)

S - If 7 of the items listed are "Outstanding" or "Satisfactory".

R - If 3 of the items are "Improving" or "Needs to Improve".

Emotional (Growth)

S - If 6 of the items listed are "Outstanding" or "Satisfactory".

R - If 3 of the items are "Improving" or "Needs to Improve".

Social (Growth)

S - If 3 of the items listed are "Outstanding" or "Satisfactory".

R - If one of the items listed is "Improving" or "Needs to Improve".

Intellectual (Growth)

S - If 15 of the items listed are "Outstanding" or "Satisfactory".

R - If 4 of the items listed are "Improving" or "Needs to Improve".

Notc: Retests (only if consiaerea necessary by the school review team)  
Write in the name of the test and score.

Name of Pupil \_\_\_\_\_

**Evaluation Guide for Mid-Year Recording**

**O - Outstanding**

**S - Satisfactory**

**N - Needs to improve**

(Check only those items considered pertinent)

**PHYSICAL GROWTH**

**COMMENT**

The child shows:		
- control of large muscles		
- fine muscle coordination		
- gross hand-eye coordination		
- fine hand-eye coordination		
- left to right eye movement		
- a sense of rhythm		
- a sense of balance		
The child is developing an awareness of:		
- laterality (inner awareness of left and right)		
- position of body in space		
- directionality (in front, behind, up, down, under, behind ...)		

**EMOTIONAL GROWTH**

**COMMENTS**

The child is:		
- reliable and responsible		
- independent		
- overly sensitive		
The child shows:		
- self control		
- control under stress		
- a good self image		
- initiative and leadership		
- a sense of humor		
- ability to relax		

Name of Pupil \_\_\_\_\_

Mid-Year Recording (continued)

**SOCIAL GROWTH**

**COMMENTS**

The child:

- shares and takes turns

- responds to signals and directions

- has a good relationship to peers

- is maturing at play (solitary, parallel, group)

**INTELLECTUAL GROWTH**

**COMMENTS**

The child is able to recognize:

- rhyming words

- initial consonants

- likenesses and differences (auditory and visual)

He can listen (responsively; passively)

He has a good attention span

He has a good vocabulary

He expresses his ideas well

He can relate a story in sequence

He can sing a simple tune

He can match musical tones

He is interested in:

- textual material

- writing

He has a good memory

He is observant

He is creative

He understands mathematical terms

He understands value of number

He recognizes numerals of 12 or more

He can count to 12 more meaningfully

## **EARLY IDENTIFICATION PROGRAM ORGANIZATION**

The organization of the Early Identification Program is as follows:

### **CENTRAL COMMITTEE**

#### **Composition**

- one representative from each Area Steering Committee
- one School Board representative
- representation from the Superintendents' Department
- the Director of the Early Identification Program (Chairperson)
- one Child Guidance Clinic representative
- nursing director
- representation from consultants from each Area

#### **Function**

- ensures that the overall Early Identification Program in the Division is carried out
- members represent the viewpoints of their respective groups and provide feedback to their groups
- considers recommendations from the Area Steering Committee
- based on data provided by the Area Steering Committee, the Central Committee:
  - prepares a report stating results of screening
  - makes recommendations regarding the program
- ensures the formation of steering committees for the following year
- coordinates administration of the Early Identification Program
- responds to requests for assistance and provides support
- provides minutes from Central Committee to Area Steering Committees

### **STEERING COMMITTEE**

#### **Composition**

- |                     |  |
|---------------------|--|
| Representation from | <ul style="list-style-type: none"> <li>- principals</li> <li>- Public Health Nurses</li> <li>- kindergarten teachers</li> <li>- Child Guidance Clinic</li> <li>- consultants</li> <li>- superintendents</li> <li>- physical education resource teachers</li> </ul> |
|---------------------|--|

#### **Function**

- ensures that the Early Identification Program is carried out in each of the three Areas according to the terms of reference of the Divisional program
- determines and responds to the needs in the Area
- collects and compiles data for evaluation of the Early Identification Program
- provides representation to the Central Committee
- responds to requests for assistance and provides support to Review Teams
- the members represent the viewpoints of their respective groups and provide feedback to their groups
- provides Area Steering Committee minutes to the Central Committee and other Area Steering Committee chairpersons

## REVIEW TEAM

### Composition

- principal of the school
- kindergarten teacher(s)
- resource teacher
- school nurse
- representation from Child Guidance Clinic
- consultant(s)
- physical education resource teacher

### Function

- ensures that the screening process is being carried out for each kindergarten student and that all information is recorded on the data sheets
- ensures that action has been taken based upon screening results
- ensures that a comprehensive view of each child is being taken through the pooling of information and expertise by all team members
- reports to the Area Steering Committee any additional need for assistance

## SUGGESTED TIMES AND AGENDA FOR REVIEW TEAM MEETINGS

### September (Principal will call and chair first meeting)

- set dates and make plans for school year
- designate a contact person who will:
  - coordinate screening information
  - ensure follow-up
  - ensure recording of information of data sheets
  - call and chair meetings

### October - November

- consider Section "A" data sheets and complete Section "B"

### March

- evaluate follow-up and complete data sheet Section "D"

### May

- consider relevant information on data sheets with receiving teachers
- complete data sheet Section "E"
- return completed yellow data sheets to Area Steering Committee

It is realized that it is very difficult for all members of the complete Review Team to be present at all meetings. However, it is desirable to attempt to have the entire team meet four times a year in order to gain a total perspective of the child and the program.

APPENDIX 3

## GENERAL NOTE TO OBSERVERS

1. Thank you for doing this.
2. On arrival at the school tell the receptionist who you are and that you are expected in the kindergarten. She will direct you.
3. There are one-way mirrors at the kindergarten door. I will meet you there.
4. You will not be introduced to the children. They are used to strangers wandering around!
5. Each child will have a name tag--hopefully you will be able to see it easily.
6. When your observation is finished, I will meet with you briefly to discuss any difficulties and to pick your brains for ways to improve the code.
7. Fold this page over--there is more to come!



## Code A - Revision I

Time:

Date:

Page #:

Activity:

Observer:

Code: T = talk without permission, whistle, shout

R+= reach out and touch someone who responds

R-= ignores

D = dispute with another child; includes verbal aggression

O = out of area where group is gathered

N/C = fails to do as teacher asks

Observe 20 sec.; rest 10 sec. Move to next child.

e.g.	Name	Behavior	Interval I	Interval II
		T	1	1
		R+	1	
	Dot	R-		
	Bloggs	D		1
		O		
		N/C	1	
		T		1
		R+		
	Spot	R-		
	Sploggs	D		
		O	1	
		N/C		1
		T		
		R+		
		R-		
		D		
		O		
		N/C		

Make a slash  
for each  
behavior which  
occurs during  
interval. If  
behavior occurs  
twice, make 2  
slashes.

## Code B

## Code for Stimulus

I+ = instruction, not aversive - Score when teacher gives child a direct command, or asks a question which is a command, e.g. Will you come here? Do not score if a behavior is not specified or if an act of compliance is not requested.

I- = instruction, aversive - Score as above, but when the adult's voice or behavior makes the contact aversive, e.g. threats, ridicule, shouting, menacing tone, grabbing, pushing, striking.

I+ and I- may both be scored in one interval if they both occur.

Sa+ = social attention from an adult, non-aversive - Scored for any deliberate physical contact made by an adult with the child and mutual looking at each other entailing recognition demonstrated through non verbal cues, e.g. smiling, hugging, placing a hand on shoulder, invitation to play.

Sa- = social attention from an adult, aversive - Score as Sa+ but if it is judged unpleasant because of verbal content, voice quality, or assertive behavior of the adult.

Sc+ = social attention from a child, non aversive - Score as Sa+, but the dispenser is a child.

Sc- = aversive social attention from a child - Score as Sa-, but the dispenser is a child.

Teacher Response Code  
(Revision to Code B)

Whenever, during an observation interval, the teacher praises or ignores the child's behavior, enter "P" or "Ig" on the code sheet. This should be accompanied by a sequence number as well. "P" and "Ig" should be recorded as often as they occur, which is why there are six boxes instead of just one!

Code for Responses

C = Comply = The subject does as he or the group is requested during the interval. Score in subsequent intervals as well if instruction specifies an act of indefinite length, e.g. story reading during which children are asked to sit quietly. Score if child responds to question asked of group in general.

O = Opposition - Scored for non compliance with rules imposed by adults. This requires knowledge of the rules. This is scored for each interval in which non compliance goes on, until a new instruction is given or the setting changes. Can not be scored if adult prefaces request with "Would you like to ....."

O- = Aversive opposition - This is the same as "opposition" but is judged to be unpleasant because of voice quality, verbal content (threats, ridicule or the assertive behavior of the subject, e.g. wrenching away from adult, shouting "no", making faces or rude gestures when not complying, name-calling.

Score spitting here.

Cp = Complaints - This is scored for any instance of whining, crying, intelligible vocal protests (more than "no"), or displays of temper (including messing up someone's work or grabbing their toys, throwing things, or having a tantrum). These behaviors may simultaneously be scored OS, O and O- if they are in violation of existing rules or instructions.

Hit = Hitting others - This category is included to specify one type of aversive opposition, e.g. a child says "Give me the block" and the subject hits him. Code both "O" and "hit". If the subject approaches another child and hits him unprovoked, code only "Hit".

D = Disruptive - Score this when the subject approaches another child and bothers him unprovoked. Included here are poking others in groups or individual situations, taking their property, talking to others who are listening, competing with teacher for attention of other children.

## Instructions to Observers: October 23

1. W's teacher is finding the presence of observers a burden. Today please try to observe him from the mirror. If that doesn't work today, we'll do something else next week.
2. The code for W (Code B) has been changed to include the teacher's responses to his behavior--praise or ignore. The directions for this are on the attached sheet, headed Teacher Response Code.
3. In order for me to define the sequence of behaviors, please enter a numeral under the code item you have checked. e.g.

S	It <sup>(1)</sup>	I-	Sa+	Sa <sup>-</sup>	Sc+	Sc <sup>-</sup>
R	C <sup>(3)</sup>	O	O <sup>-</sup>	Cp	Hit	D
T	P <sup>(4)</sup>					

This tells me that the teacher gave an instruction, the child opposed, then complied, then was praised by the teacher.

4. If you do not make any code entries during an interval could you briefly in the code boxes write down what is going on, e.g. "In time out".
5. If W is engaged in behavior which is appropriate, e.g. playing a game, making things, please score "C".

Code B - 1st revision

Date

Subject

Time

Observer

P.4

S	I+	I-	Sa+	Sa-	Sc+	Sc-		S	I+	I-	Sa+	Sa-	Sc+	Sc-
R	C	O	O-	Cp.	Hit	D		R	C	O	O-	Cp.	Hit	D
T								T						
X														
S	I+	I-	Sa+	Sa-	Sc+	Sc-		S	I+	I-	Sa+	Sa-	Sc+	Sc-
R	C	O	O-	Cp.	Hit	D		R	C	O	O-	Cp.	Hit	D
T								T						
X														
S	I+	I-	Sa+	Sa-	Sc+	Sc-		S	I+	I-	Sa+	Sa-	Sc+	Sc-
R	C	O	O-	Cp.	Hit	D		R	C	O	O-	Cp.	Hit	D
T								T						
X														
S	I+	I-	Sa+	Sa-	Sc+	Sc-		S	I+	I-	Sa+	Sa-	Sc+	Sc-
R	C	O	O-	Cp.	Hit	D		R	C	O	O-	Cp.	Hit	D
T								T						
X														

## Code C

## Instructions to Observers

for October 10th,

Tuesday, 9-9:30

Sit where you can see everyone--each other.

Be sure you all make your observation at the same moment.

This is more important than adhering rigidly to the 3 or 5 minute interval. You should now agree on one timekeeper and the signal for the moment the observation should be taken.

1. As soon as the Lord's Prayer is over, take a note of the time. At the end of five minutes count the number of children who are engaged in the following activities:
  - a) not sitting on their bottoms--unless they are supposed to be standing
  - b) wandering around the room away from the main group--unless they have been sent to do something
  - c) talking, playing, daydreaming or doing anything which is not paying attention to the teacher or me.
2. Write down the total number of children engaged in these behaviors (a+b+c). The number goes in Column I below.
3. When all observers are finished, note the time.
4. Three minutes from now, on the signal from the timekeeper, make your second observation and count the children engaged in a+b+c behaviors. Enter a+b+c in Column 2.
5. Repeat at 3 minute intervals till 9:30 or the group breaks up, whichever happens first.



## Code C - Revision I

Date:

Observer:

Page #:

Observe 1 minute: rest 30 seconds.

If any child is disruptive during an interval, make an X in the interval. If there is no disruption, leave the interval blank. Indicate the final interval with a slash.

Disruption occurs when a child:

- 1) talks without permission
- 2) is not sitting on his bottom in the area
- 3) does not have his hands in his lap

e.g.

I	II	III	IV	V	VI	VII	VIII	IX	X
X				X					

## Instructions - Code D

1. Observe 30 seconds, rest 15 seconds.
2. Stimulus conditions are defined exactly as in Code B.
3. Adult line should be scored for "Praise" or "Ignore".  
"Ignore" is defined as the absence of an expected positive response.
4. V+ is a verbal response which is polite, appropriate or positive in nature.
5. V- is a verbal response which is bossy; an order (not a request); a put down; a tease or any other aversive comment.
6. Hit - as in Code B.
7. Ignore - should be coded when another child or an adult approaches or talks to A and she doesn't acknowledge the arrival or respond to them in any way.
8. Approach - code when A goes up to any new child, adult or group.
9. Withdraw - code when A responds to any approach (+ or -) by moving away.
10. Comply - as Code B.

20 copies

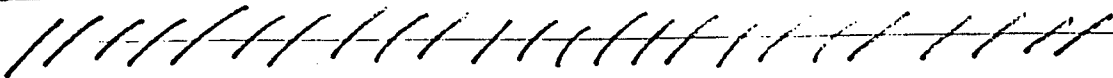
Code D

Name

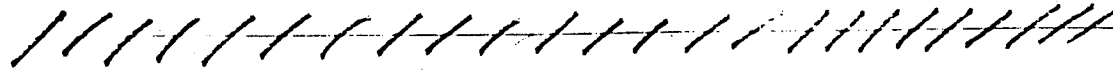
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Date

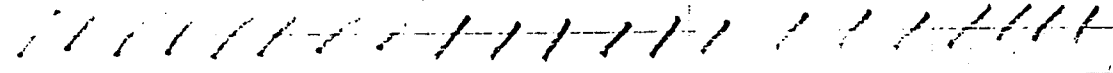
S	I+	I-	Sa+	Sa-	Se+	Se-			S	I+	I-	Sa+	Sa-	Se+	Se-		
R	V+	V-	Hit	Ignore	Appr	Withd	Comply		R	V+	V-	Hit	Ignore	Appr	Withd	Comply	
Adult									Adult								



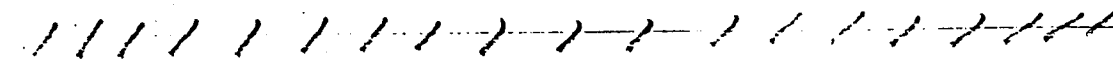
S	I+	I-	Sa+	Sa-	Se+	Se-			S	I+	I-	Sa+	Sa-	Se+	Se-		
R	V+	V-	Hit	Ig.	Appr	Withd	Comply		R	V+	V-	Hit	Ig.	Appr	Withd	Comply	
Adult									Adult								



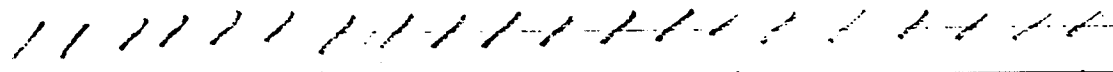
S	I+	I-	Sa+	Sa-	Se+	Se-			S	I+	I-	Sa+	Sa-	Se+	Se-		
R	V+	V-	Hit	Ig.	Appr	Withd	Comply		R	V+	V-	Hit	Ig.	Appr	Withd	Comply	
Adult									Adult								



S	I+	I-	Sa+	Sa-	Se+	Se-			S	I+	I-	Sa+	Sa-	Se+	Se-		
R	V+	V-	Hit	Ig	Appr	Withd	Comply		R	V+	V-	Hit	Ig.	Appr	Withd	Comply	
Adult									Adult								



S	I+	I-	Sa+	Sa-	Se+	Se-			S	I+	I-	Sa+	Sa-	Se+	Se-		
R	V+	V-	Hit	Ig	Appr	Withd	Comply		R	V+	V-	Hit	Ig	Appr	Withd	Comply	
Adult									Adult								



S	I+	I-	Sa+	Sa-	Se+	Se-			S	I+	I-	Sa+	Sa-	Se+	Se-		
R	V+	V-	Hit	Ignore	Appr	Withd	Comply		R	V+	V-	Hit	Ig	Appr	Withd	Comply	
Adult									Adult								



## Code E

Recording System for Child Interaction  
With Other Children and the Teacher  
or Teacher Interaction with Children

15 second observe: 15 second rest


Client's behavior (+ or -)

Other's behavior (C+ or C- if a child  
T+ or T- if the teacher)

\*\*If there is no response leave the triangle  
blank, e.g. blank = ignore

APPENDIX 4

*GOOD BEHAVIOR GAME: EFFECTS OF INDIVIDUAL  
CONTINGENCIES FOR GROUP CONSEQUENCES ON  
DISRUPTIVE BEHAVIOR IN A CLASSROOM<sup>1</sup>*

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Out-of-seat and talking-out behaviors were studied in a regular fourth-grade class that included several "problem children". After baseline rates of the inappropriate behaviors were obtained, the class was divided into two teams "to play a game". Each out-of-seat and talking-out response by an individual child resulted in a mark being placed on the chalkboard, which meant a possible loss of privileges by all members of the student's team. In this manner a contingency was arranged for the inappropriate behavior of each child while the consequence (possible loss of privileges) of the child's behavior was shared by all members of this team as a group. The privileges were events which are available in almost every classroom, such as extra recess, first to line up for lunch, time for special projects, stars and name tags, as well as winning the game. The individual contingencies for the group consequences were successfully applied first during math period and then during reading period. The experimental analysis involved elements of both reversal and multiple baseline designs.

Researchers have recently begun to assess the effectiveness of a variety of behavioral procedures for management of disruptive classroom behavior. Some investigators have arranged token reinforcement contingencies for appropriate classroom behavior (Birnbauer, Wolf, Kidder, and Tague, 1965; O'Leary and Becker, 1967; Wolf, Giles, and Hall, 1968). However, these token reinforcers often have been dependent upon back-up reinforcers that were unnatural in the regular classroom, such as candy and money. On the other hand, several investigators have utilized a reinforcer intrinsic to every classroom, *i.e.*, teacher attention (Zimmerman and Zimmerman, 1962;

Hall and Broden, 1967; Becker, Madsen, Arnold, and Thomas, 1967; Hall, Lund, and Jackson, 1968; Thomas, Becker, and Armstrong, 1968; Madsen, Becker, and Thomas, 1968). Even so, at least one group of investigators (Hall *et al.*, 1968) encountered a teacher who apparently did not have sufficient social reinforcers in her repertoire to apply social reinforcement procedures successfully. The present study investigated the effects of a classroom behavior management technique based on reinforcers natural to the classroom, other than teacher attention. The technique was designed to reduce disruptive classroom behavior through a game involving competition for privileges available in almost every classroom. The students were divided into two teams and disruptive behavior by any member of a team resulted in possible loss of privileges for every member of his team.

## METHOD

### *Subjects and Setting*

The study was conducted in a fourth-grade classroom of 24 students. Seven of the students had been referred several times by the teacher to the school principal for such problems as out-of-seat behavior, indiscriminate noise and talking, uncooperativeness, and general classroom disruption. Further, the school principal reported that a general behavior management

<sup>1</sup>This study is based upon a thesis submitted by the senior author to the Department of Human Development in partial fulfillment of the requirements for the Master of Arts degree. The research was supported by a Public Health Service Fellowship IFI MH-36, 964-01 from the National Institute of Mental Health and by a grant (HD 03144) from the National Institute of Child Health and Human Development to the Bureau of Child Research and the Department of Human Development, University of Kansas. The authors wish to thank Drs. Donald M. Baer and Don Bushell, Jr., for helpful suggestions in preparation of the manuscript; Mr. Rex Shanks, Mr. Frank A. Branagan, and Mrs. Betty Roberts for their invaluable help in conducting the study; and Mrs. Susan Zook, Mrs. Sue Chen, and Mr. Jay Barrish for their contributions of time for reliability checks. Reprints may be obtained from the authors, Department of Human Development, University of Kansas, Lawrence, Kansas 66044.

problem existed in the classroom. According to the teacher, she frequently had informed the class of the rules of good classroom behavior.

#### *Definition of the Behavior*

One and sometimes two observers visited the classroom for approximately 1 hr each Monday, Wednesday, and Friday. Observation took place during the last half of the reading period and the first half of the math period. During both of these periods, similar types of activities such as individual assignments, oral lessons and discussion, chalkboard work, and short quizzes were assigned to the students; only the subject matter varied—i.e., reading or math. Recording was discontinued during the brief transition from the reading to the math period.

Observers sat at the side of the classroom and avoided eye contact and interactions both before and during recording. Observers used recording sheets similar to those used in other studies (Hall *et al.*, 1968). These were divided into rows of squares for each behavior. Each square represented an interval of 1 min. If any child in the classroom emitted the behavior, a check was made in the row assigned to the behavior, in the square representing that particular interval of time. Teacher attention to inappropriate behavior was marked in the corresponding square by an asterisk.

Inter-observer agreement was analyzed by having a second observer periodically (at least once during each of the experimental conditions) make a simultaneous but independent observation record. Agreement was measured by comparing the two records for agreement, interval by interval. The percentage of agreement between the two records was calculated (number of agreements  $\times$  100  $\div$  the total number of intervals). In addition, by indicating teacher attention to inappropriate behavior by an asterisk, intervals could be compared asterisk against check in the appropriate square to yield a percentage of agreement between the observer and the teacher during the phases that the game was in affect.

While the behavioral definitions were constructed by the experimenter, they were formulated with the help of the principal and the classroom teacher on the basis of what they considered to be the disruptive classroom behaviors.

*Out-of-seat behavior* was defined as leaving the seat and/or seated position during a lesson or scooting the desk without permission. Exceptions to the definition, and instances not recorded, included out-of-seat behavior that occurred when no more than four pupils signed out on the chalkboard to leave for the restroom, when pupils went one at a time to the teacher's desk during independent study assignment, and when pupils were merely changing orientation in their seat. Also, when a child left his seat to approach the teacher's desk, but then appeared to notice that someone else was already there or on his way and consequently quickly returned to his seat, the behavior was not counted. Permission was defined throughout the study as raising one's hand, being recognized by the teacher, and receiving consent from her to engage in a behavior.

*Talking-out behavior* was defined as talking or whispering without permission. It included, for example, talking while raising one's hand, talking to classmates, talking to the teacher, calling the teacher's name, blurting out answers, or making vocal noises such as animal-like sounds, howls, cat calls, *etc.*, all without permission.

#### *Introduction of the Game*

Immediately after the reading period and before the math period in which the system was initially used, a presentation closely following the points listed below was made by the teacher to her class. She explained that: (a) what they were about to do was a game that they would play every day during math period only. (b) The class would be divided into two teams. (She then divided the class by rows and seats of the center row.) (c) When a team or teams won the game, the team(s) would receive certain privileges. (d) There were certain rules, however, that the teams had to follow to win. (These rules were based on the behavior categories as previously defined.) (1) No one was to be out of his seat without permission (except that four pupils were allowed to leave their seats without permission in order to sign out on the chalkboard to leave for the restroom). Permission could be obtained only by raising the hand and being called on by the teacher. (2) No one was to sit on top of his desk or on any of his neighbors' desks. (3) No one was to get out of his

### GOOD BEHAVIOR GAME

not to move his desk or scoot his desk. (4) No one was to get out of his seat to talk to a neighbor. This also meant there was to be no leaning forward out of a seat to whisper. (5) No one was to get out of his seat to go to the chalkboard (except to sign out for the restroom), pencil sharpener, waste basket, drinking fountain, sink, or to the teacher without permission. (6) When the teacher was seated at her desk during study time, students could come to her desk one at a time if they had a question. (7) No one was to talk without permission. Permission could again be obtained only by raising the hand and being called on by the teacher. (8) No one was to talk while raising his hand. (9) No one was to talk or whisper to his neighbors. (10) No one was to call out the teacher's name unless he had permission to answer. (11) No one was to make vocal noises. (e) Whenever she saw anyone on a team breaking one of these rules, that team would get a mark on the chalkboard. (f) If a team had the fewest marks, or neither team received more than five marks, the team(s) would get to (1) wear victory tags, (2) put a star by each of its members' names on the winner's chart, (3) line up first for lunch if one team won or early if both teams won, and (4) take part at the end of the day in a 2-min free time during which the team(s) would have special projects. (g) The team that lost would not get these privileges, would continue working on an assignment during the last half-hour of the day, and members would have to stay after school as usual if they did not do their work during the last half-hour period. (h) If a team or teams had received more than 20 marks in a week, they would get the extra weekly privilege of going to recess 4 min early.

Whenever the experimental conditions were changed, point "a" was again presented to the class by the teacher with a new explanation about when the game would be played. All the above points were presented before the general use of the program and then once again after a week-long period of achievement testing during which time the game had not been in effect. The victory tags were commercially prepared circular convention tags. Each tag was of the same color and was threaded with a uniform length of wool yarn of a contrasting color. Tags were worn around the neck. They allowed the teacher to identify easily the win-

ners during the rest of the day. The star chart consisted of a 22-in by 28-in piece of white poster board labeled "Winners". The chart was divided into two portions designated "Team One" and "Team Two" and ruled off with team members (names) by dates (month and day). The stars were commercially manufactured with gummed backs. The special projects consisted of educational activities in the areas of science or arts which were done as a team or individually.

During the first period in which the game was applied, the teacher stipulated that the team with the fewest marks, or 10 or less, would win. The criterion for the second observed session, and for all other sessions except the last one, was set at five marks or fewer. The last session was also the last full day of school. The teacher expected the children to be very excited, and she wanted to be sure that both teams would win, since she had treats planned for the special project period. For this session the criterion was the fewest marks, or eight or less.

#### *Experimental Phases*

The experimental design included both reversal and multiple baseline phases. The data were recorded separately during the reading and math periods providing the two baselines. The study was divided into four corresponding phases. A session in one class period corresponded to a session in the other class period in that they were recorded consecutively and on the same day.

*I. MATH-Baseline, READING-Baseline.* For 10 sessions, the normal (baseline) rates of out-of-seat and talking-out behaviors of the class were recorded during the math and reading periods. The teacher carried out her classroom activities in her usual manner.

*II. MATH-Game<sub>1</sub>, READING-Baseline.* During the second phase, the game was introduced during math but not during reading.

*III. MATH-Reversal, READING-Game.* In the third phase, the game was introduced during reading and withdrawn during math.

*IV. MATH-Game<sub>2</sub>, READING-Game.* Lastly, the game was reintroduced in math period and remained in effect during reading period. Both periods were treated as one extended period, thus using the same initial criteria of the least number of marks or five or fewer marks.

## RESULTS

Figure 1 shows the extent to which out-of-seat and talking-out behaviors were influenced by the game. These data indicate that the game had a reliable effect, since out-of-seat and talking-out behaviors changed maximally only when the game was applied. In the math and reading baselines, the median intervals scored for talking-out was approximately 96% and for out-of-seat it was approximately 82%.

When the game was applied during math period, there was a sharp decline in the scored intervals to medians of approximately 19% and 9% respectively. Meanwhile, during reading period where the game was not applied,

talking-out behavior remained essentially at baseline levels and out-of-seat behavior declined somewhat.

During the third phase, the game was withdrawn during math period, and the baseline rates of the behaviors recovered; in the same phase during the reading period, the game was introduced for the first time, and a decline in the per cent of scored intervals for both behaviors resulted. Finally in the fourth phase, the game was applied during math and reading periods simultaneously. The disruptive behaviors again declined during math and continued low in reading.

Both teams almost always won the game. Of the 17 class periods that observations were made both teams won on all but three occasions, or 82% of the time.

The reliability of the measurement procedures was analyzed during the reading and math periods on six occasions. Three different reliability observers were used. Agreement for out-of-seat behavior ranged from 74% to 98% and averaged 91%. Agreement for talking-out behavior ranged from 75% to 98% and averaged 86%.

Agreement between the observer and the teacher was measured during each class period that the game was played. Agreement about the occurrence of out-of-seat behavior ranged from 61% to 100% and averaged 92%. Agreement about the occurrence of talking-out behavior ranged from 71% to 100% and averaged 85%. Thus, the levels of agreement between the observer and the teacher, and the observer and the reliability observers were approximately the same.

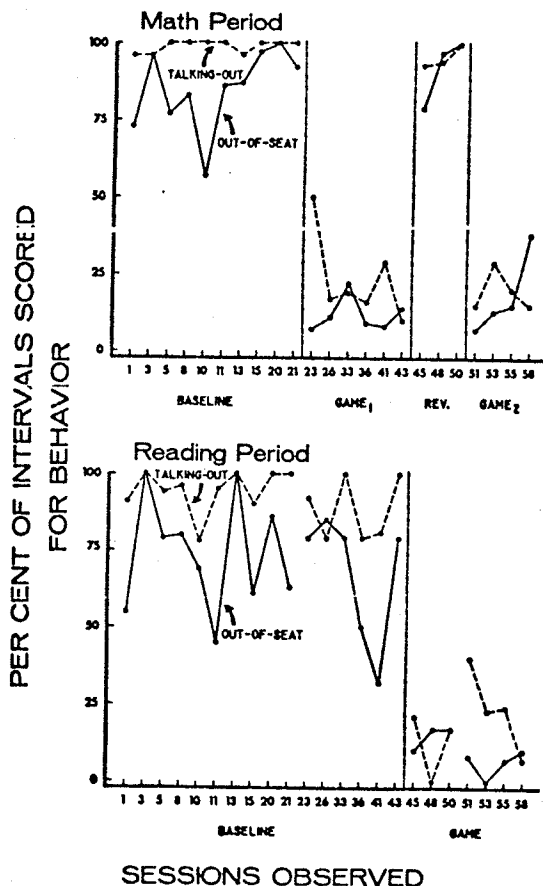


Fig. 1. Per cent of 1-min intervals scored by an observer as containing talking-out and out-of-seat behaviors occurring in a classroom of 24 fourth-grade school children during math and reading periods. In the baseline conditions the teacher attempted to manage the disruptive classroom behavior in her usual manner. During the game conditions out-of-seat and talking-out responses by a student resulted in a possible loss of privileges for the student and his team.

## DISCUSSION

The game significantly and reliably modified the disruptive out-of-seat and talking-out behavior of the students. The experimental design, involving elements of both multiple baseline and reversal strategies, demonstrated that the effect could be replicated across subject matter periods and that the game had a continuing role in maintaining the reduced level of disruptive behavior. On the other hand, no analysis was carried out to determine the roles of the various components of the game. An analysis of exactly what components contributed to the effectiveness of the procedure is left to future research.

### GOOD BEHAVIOR GAME

As in the present study, the subject-matter periods of the typical school day lend themselves perfectly to a multiple baseline experimental design. Simultaneous baselines of the behavior of one student or of an entire class can be obtained simultaneously in two or more subject-matter periods. The modification technique can then be introduced successively into each of the periods. If in each instance there is a change in behavior (and the behavior during the remaining baseline periods remains essentially unchanged), the investigator will have achieved a believable demonstration of the effectiveness of his technique. And he will have done so without having depended upon or required a reversal of the behavior (Baer, Wolf, and Risley, 1968).

Some problems arose which should be noted. The preparation of the special projects required the time and ingenuity of the teacher. This sometimes placed an extra burden on her, since she had also to prepare regular lessons. Another problem that was perhaps not as serious concerned teacher observation behaviors. No signaling system was used. The teacher had to become alert to out-of-seat and talking-out behaviors in addition to continuing to conduct regular classroom activities. Spotting the target behaviors did not appear to be difficult for the teacher except when she faced the chalkboard or talked with individual students.

The greatest problem with the game involved two students who, before the study began, had been referred to the principal on a number of occasions for disruptive behavior. Both were on the same team and consistently gained a number of marks for their team. Usually they engaged in talking-out behavior. In most instances only one of the students was involved. In one session, one of these students emphatically announced that he was no longer going to play the game. Both the other children and the teacher expressed the opinion that it was not fair to penalize further an entire team because one member would not control himself. The teacher, therefore, dropped the student from the game and the marks that normally would have been imposed on the entire team were imposed just on him. During the free time, he also refused to work so he was kept after school. The same individual-consequence procedure was used for one or both students on six occasions. Each

time, the marks that they had accumulated were subtracted from the team score. It is possible that the numerous peer comments that appeared to be directed toward these students may have served as social reinforcement for their disruptive behavior. It is important to note, however, that when the students were dropped from their team the observer continued to record their behavior as before.

Some reactions to the program were gathered from the children, teacher, and school officials. The program was apparently popular with students and school officials. Every professional involved in the study who directly observed the classroom situation during the game stated that in general the students seemed to enjoy playing the game. The teacher stated that some students went so far as to request that the game be played every period. After the last session in which the game was played, the teacher requested that each child briefly write whether they liked or disliked the game and why. Of the 21 comments turned in, 14 indicated that they liked the game and seven indicated that they did not. Of those who indicated that they liked the game, some made comments such as: "I like the game because I can read better when it is quiet", "I liked it. Cause it was fun", "You give us free time", "I like the morning game because it helps keep people quiet so we can work", and, "I like the team game because we win all the time". Of those who indicated that they disliked the game, some made comments such as: "No I hate being quiet", "I didn't like it because you didn't make good rules", "Because when your team loses the team that won will make fun of your team", and "Its not fair because we have the guys that talk a lot". The teacher stated that she was pleased with the method because "it was an easy program to install since it did not change any of the rules or daily activities in the classroom." All of the back-up reinforcers, with the possible exception of the victory tags, naturally occurred in the classroom setting. Only the structure of the free-time period at the end of the day changed, but it, of course, involved projects of an educational nature.

While game-like techniques are certainly not new to the classroom (Russell and Karp, 1938), an experimental analysis of their effects on behavior is unique. It may follow that an understanding of the mechanisms of the game,

e.g., peer competition, group consequences vs. individual consequences, etc., together with research designed to enhance the significance of winning, by pairing winning with privileges, could lead to a set of effective and practical techniques of classroom behavior management based on games.

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