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PARENT GROUP INSTRUCTION IN BEHAVIORAL APPLICATIONS
WITH THE PARENT AS PRIMARY CHANGE AGENT

DISSERTATION
Presented in Partial Fulfillment of the Requirements for the Degree Doctor of Philosophy in the Graduate School of The Ohio State University

By
John Leland McManus, B.S., M.A.

* * * * *

The Ohio State University
1972

Approved by

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Major Field: School Psychology

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CHAPTER I

INTRODUCTION

Introduction to the Problem

The area of investigation in the present research is concerned with effective ways of ameliorating child problem behaviors through parents. The following will consider various ways in which parents are influenced regarding child-rearing techniques.

Ways Parents Get Information for Child Rearing.— One of the major influencers for modes of parental behavior regarding children is the mass media. This involves almost exclusively the printed word in the form of books, pamphlets, magazines and newspapers.

Books on parenting are numerous. There have been many books written for parents of special or handicapped children (e.g., for parents of mentally retarded children—Abraham, 1958a; Kirk, 1958; Slaughter, 1963; for parents of neurologically impaired-physically handicapped children—Anderson, 1963; Graham and Colovini, 1961; Myklebust, 1950; for parents of emotionally-socially disturbed children—Bruch, 1952; Stern, 1962; Wolf and Szasz, 1954; for parents of deaf and hard of hearing children—Bloom, 1963; Fuller, 1962; and for parents of gifted children—Abraham, 1958b; Brumbaugh and Roshco, 1959; Cutts and Moseley, 1953). Also available to parents
are numerous books concerned with everyday problems of child rearing. These have ranged from a psychoanalytic orientation (e.g., Baruch, 1949; Fraiberg, 1959), to a pediatric orientation (e.g., Spock, 1946, 1963; Homan, 1970), to a behavioristic orientation (e.g., Smith and Smith, 1969; Valett, 1969; Diebert and Harmon, 1970; Becker, 1971; Beltz, 1971; Patterson, 1971; Patterson and Cullion, 1971; Madsen and Madsen, 1972).

For every one published book, there may be hundreds of pamphlets dealing with every conceivable aspect of child behavior distributed yearly. Brim (1959) estimated that in any given year available books on child rearing number several hundred and that about twenty-five million pamphlets are distributed each year. Such pamphlets are given to the public largely through professional organizations, such as National Association for Retarded Children, Public Affairs Committee, American Institute of Family Relations, National Council on Family Relations, American Social Health Association, Child Study Association of America, National Association for Mental Health, and U.S. Children's Bureau.

Magazines for parents made their appearance in the United States in the early nineteenth century (Brim, 1959). At present, there are a large number of magazines appealing to parents. Some of these are devoted almost exclusively to matters of parent education (e.g., Parents' Magazine and the National Parent-Teacher) and others include material on parenting (e.g., The Ladies' Home Journal, Good Housekeeping, and Redbook).

Newspapers throughout the country often include articles
regarding child rearing and many carry daily columns involving concerns of parents, such as those by Ann Landers and Abigale Van Buren.

In addition to the mass media, parents are offered advice and consequently influenced for child rearing from many different directions. The most obvious source is their own family members, particularly their own parents in a sort of traditional sense— that is, "it was done this way when we were kids, therefore...." A second potent source of advice givers is other parents (e.g., as early as the beginning nineteenth century, mothers' groups known as "Maternal Associations" met regularly to study child-rearing problems; it was out of one such group of mothers meeting in Chicago that the Child Study Association of America formally began in 1888 [Brim, 1959]). Also, advice is given profusely to parents from various professional personnel, such as the medical profession (e.g., Korsch [1956] describes a program for training medical personnel [general practitioners, pediatricians, etc.] in how best to advise parents concerning the rearing of their children), the educational profession (mainly teachers— parent-teacher conferences are a matter of routine in most school systems) and anyone else the parent may have contact with regarding their child (e.g., school psychologists, social workers, guidance counselors, school nurses, truant officers, etc.). It may be reasonably conjectured that the "advice" offered from the many available sources differs considerably and is often unfounded.

In addition to the influence of mass media and professional and sub-professional advice givers, parental child-rearing behavior may be affected by more formal approaches. For example, a parent might
encounter academic teaching by enrolling in a college course dealing with child development and family relations, might form a therapeutic or counseling relationship with a psychiatrist or psychologist in either an individual or group setting, or might enter a parent discussion group led by a trained professional or lay person.

Critique of Foregoing Avenues of Child-Rearing Information for Parents.— The foregoing alludes to the supposition that concern for the education and influencing of parents regarding the general area of child rearing has been an historic endeavor and pinpoints some of the countless sources of available information for parenting. The question now arises concerning the efficacy of the above-mentioned traditional approaches.

In regard to the mass media involving parenting, extensive contradictions exist both across time and across current sources. For example, considering the time variable, Stendler (1950) surveyed articles on child rearing appearing in three women's magazines from 1890-1950 and Vincent (1951) reviewed similar articles for approximately the same time period; both surveys revealed that recommendations to parents regarding a wide spectrum of parental concerns (such as feeding schedules, age of toilet training, manner of discipline, etc.) underwent definite discrete cycles ranging from "extreme rigidity to excessive permissiveness". Spock (1963), considered by many to be one of the foremost parent educators of the 1940's and 1950's, gave a reason to revise his 1946 edition of Baby and Child Care as "a need to counteract a growing tendency toward overpermissiveness among certain parents, to buck up their self-assurance and authority, to help them to
give firmer guidance to their children". In regard to current sources for any one period of time, numerous contradictions also exist; discrepancies tend to be based on the competency and theoretical orientation of the writer. For example, regarding competency, many of the articles found in women's magazines are written by laymen who offer invalid advice. Also, books written by professionals (pediatricians, psychiatrists, psychologists, etc.) often differ considerably depending upon the philosophic orientation of the writer. For example, a very popular recent book for parents, Ginott (1969), on the subject of rewarding behavior is in direct contrast to the behavioristically-oriented books, such as Beltz (1971). Ginott asserts that a parent's promising rewards for good behavior "may soon lead to blackmail, and to ever increasing demands for prizes and fringe benefits in exchange for good behavior"; Ginott further objects to rewards on moral grounds, quoting Baruch's (1949) telling of a boy "who said, 'I get what I want by keeping mother thinking I'll be bad. Of course, I have to be bad often enough to convince her she is not paying me for nothing'". On the other hand, Beltz more adequately differentiates bribery (payment for something usually illegal and not in the best interests of the person) from positive reinforcement for "good" behavior (positive consequences following socially acceptable behavior of the person and performed in his best interests).

Furthermore, while the printed form of mass media does reach a large number of people, the recipient remains essentially passive. Social-psychological research regarding attitude change has indicated that the mere imparting of information rarely, if ever, leads to any
permanent change in attitude or behavior (e.g., Festinger, 1962). Even when the recipient of information is active while reading, such as in using a programmed instructional text, it is dubious if any lasting effects result; for example, in research with his programmed text for parents, *Living With Children*, Patterson (1969) found that in itself, responding to the text produced only short-term alterations in parent–child interactions— it was only after the experimenter's introduction of operant conditioning procedures that changes in both parent and child behavior came about. Patterson views the reading of his book only as a "catalyst" that facilitates working directly with the parent.

In short, advice given to parents through the mass media alone has been and continues to be extremely contradictory in viewpoint— as such, it appears reasonable to assume that the resultant effect is "parental mass confusion" regarding the best ways of child rearing.

Similar criticisms apply to the area of receiving instruction in a formal academic course; again, the recipient is basically passive and under the influence of the theoretical bias of the particular instructor. Also, this approach to learning about effective ways of child rearing would be available to significantly fewer parents than are reached by the mass media.

Traditional therapy approaches are also available to a select few in the population (usually the wealthier). In addition, while the basic assumptions guiding such approaches (based on an underlying illness model) have been largely accepted since the turn of the present century (1900), they have recently come under close scrutiny and much
research has been presented for their empirical invalidation (e.g., Rotter, 1954; Eysenck, 1952, 1960, 1961; Szasz, 1960, 1961a, 1961b; Hobbs, 1966; Peterson, 1968; Mischel, 1968; Stuart, 1970). Some reasons why the illness model for understanding and modifying behavior did persist so long were that it was significantly more convincing than its predecessors (such as demonic explanations of behavior), society in general could avoid any personal responsibility for mental disorders, and most importantly, there existed an apparent lack of any tenable alternative models (Albee, 1968). However, with the dramatic development of learning theory over the past two decades (1952-1972), this lack no longer exists. The immediately aforementioned references adequately demonstrate the empirical superiority of the learning theory approach over the dynamic approaches to behavior. Suffice it to say here that any value for parents seeking information and methods for changing child behavior by traditional therapeutic approaches may be considered questionable at this time.

The last-mentioned traditional way that parents might be influenced regarding child-rearing techniques, parent group discussion, has a rather long history. As noted beforehand, its basic inception was the founding of the Child Study Association of America in 1888. The basic assumption guiding this approach is that increased understanding in such areas as the basic concepts in child growth and development, parent-child interactions, crisis points in normal development, etc., will aid the modification of attitudes which in turn will lead to modification of behavior. Recognition is also given to such indirect gains as a loss of sense of isolation due to sharing common problems
among a group of parents and an acquiring of greater self-confidence
due to exposure to new knowledge. The primary technique for acquiring
the above (as espoused by the Child Study Association—Auerbach,
1968) is small continuous discussion groups (about 12-15 members) who
meet for a series of ten to fifteen weekly meetings under skilled
leadership. The content areas of the discussions are initiated by the
group members themselves and the leader simply guides and facilitates
the discussions.

While the group discussion technique appears to be a worthwhile
endeavor, especially regarding indirect gains for parents and perhaps
also in temporarily assuaging the burdens of child rearing, again as
with the traditional therapeutic endeavors, it is doubtful that there
results any long-term positive behavioral changes in children and
parent-child interactions. Regarding the validity of this technique,
Brim (1959) performed a comprehensive review of the literature. He in-
dicated that first there were many difficulties involved in evaluating
effectiveness because parent education of the discussion type was on a
large scale, consisted of varied methodology and sometimes had undiffer-
entiated goals; of several hundred studies he surveyed on parent edu-
cation to 1959, Brim only found about twenty-four which met scientific
standards of evaluation (i.e., utilized adequate control groups, etc.)
and the results of these twenty-four were inconsistent and inconclu-
sive—his major conclusion was that as of 1959, the effectiveness of
parent group education through the discussion method was unresolved.

Need for Parent Education.—As indicated by the preceeding,
there are extensive informational avenues and varied resources
available for parents to be influenced and guided in their child-rearing roles and professional (psychological, medical, sociological, etc.) interest has been historical; it may be reasonably conjectured however, that the traditional methods noted beforehand have not met the need of educating parents adequately in their functions as parents and that more tenable methods in this endeavor are wanting.

The need for the professional education of parents has long been felt—largely due to the recognition of the family as a significant aspect of the environment for the growing child (e.g., Watson, 1928; Guthrie, 1938; Ackerman, 1959)—but this need may be greater currently for a number of reasons. For example, today's youth is often characterized as alienated, rebellious, harboring disrespect for authority, and so on; the rise in drug subcultures with downward age extensions and youthful vandalism and disregard for law are popular topics for newspapers and sociological treatises as well—the National School Public Relations Association recently testified that many public schools have been converted to "fortresses" to react against the violence and vandalism of youth.

Broad societal alterations have further contributed to the current need for proper education of parents. Today's society is characterized as largely mobile which has contributed to changes within family structure. The traditional "extended family" (composed of close biological relations—grandparents, parents, uncles, aunts, cousins, etc., all living in close proximity to each other) has become the "nuclear family" (composed simply of parents and immediate children as a single unit). Also, geographic movement over the past few decades
has been significantly rural-urban. These factors have reduced contact with tradition and have left parents more to their own individual resources. Additionally, mobility has led to exposure to families from different ethnic backgrounds and social classes who traditionally possess quite different manners of child rearing (e.g., White, 1957; Littman, Moore and Pierce-Jones, 1957; Kohn, 1959). Such conditions have served only to increase the parental confusion previously noted and augmented the need for sound professional intervention in problems of parenting.

Statement of the Problem

With the foregoing in mind, the purpose of the present research will be to study and evaluate a learning theory approach to the amelioration of child difficulties and parent-child interactions through parent group instruction and guidance regarding appropriate techniques for modifying child behaviors.

Organization of the Dissertation

Chapter I has presented an introduction to the subject matter concern of the dissertation (i.e., effective ways of ameliorating child problem behaviors through instruction to parents). Chapter II will present the theoretical assumptions which serve as a basis for the study. Also included will be a review of the literature reporting studies of using parents as major agents for behavior change in children, with particular emphasis on parents as change agents for their own children's behaviors in the home. Finally, the implications of the theoretical basis and literature review for the present research will be discussed.
Chapter III will describe the procedures used in the study, including the population samples and the specific design of the study. Also presented will be a statement of the specific hypotheses and a description of the data treatment. Chapter IV will present the analyses of the data, specific results of the study, discussion of the findings, and the summary and conclusions. Chapter V will present the summary and implications of the dissertation and note suggestions for further research.
CHAPTER II

THEORETICAL ASSUMPTIONS AND REVIEW OF THE LITERATURE

Theoretical Basis for the Study

Brief Overview of General Learning Theory.— That applications of learning theory are efficient and valid methods for effecting positive behavioral change in most individuals is no longer questionable, even though learning theory did take some time to achieve its present status. There is a recorded sampling of learning theory applications throughout history. For example, the basic roots are said to be in the temple psychiatry of the Greeks, who relied on social influence to strengthen new behaviors. The Romans practiced respondent conditioning by placing eels in wine cups as a cure for alcoholism (Zilboorg and Henry, 1941). One of the earliest case studies of the application of reinforcement is Itard's work with a severely retarded boy in 1800. Itard (1962) used milk as reinforcement for shaping spelling and language behavior in his subject, Victor.

The groundwork for more formalized application was laid in the late nineteenth and early twentieth century by experimentalists, such as Sechenov (1935), Pavlov (1927, 1928, 1941, 1955), Thurstone (1923, 1930), Hull (1929, 1934, 1943, 1951, 1952), Mowrer (1939, 1950, 1960), and Thorndike (1898, 1932, 1933). Many of the various learning theory
backgrounds were brought together by Burnham (1924) in 1924. While his terminology differed from current expressions, many basic concepts and technologies of behavioral modification were noted by him. Two classic experimental studies of this period were by Watson and Rayner (1920) and Jones (1924). These studies exemplified the conditioning of emotional responses in children and the generalization and maintenance of conditioned responses. These studies were a rather dramatic example that typical "abnormal" responses could be learned and unlearned as a result of learning theory application. Other similar research followed in succeeding decades (e.g., English, 1929; Jersild and Holmes, 1935; Dunlap, 1942; Fuller, 1949) but the real impetus for applied behavioral analysis was Skinner (notably Skinner, 1953). The last two decades (1952-1972) have witnessed a proliferation of research and empirical validation of the systematic application of principles of behavior (i.e., a focusing on overt behavior rather than underlying, hypothesized, vague dynamics and changing that behavior through manipulation of the environmental variables maintaining it). The more contemporary developments in learning application may be noted in such journals as Journal of Applied Behavior Analysis (1968- ), Journal of Experimental Analysis of Behavior (1958- ), Behavior Research and Therapy (1963- ), Journal of Child Psychology and Psychiatry (1960- ), Journal of Experimental and Child Psychology (1964- ), Journal of Consulting and Clinical Psychology (1937- ), Behavior Therapy (1970- ), and Journal of Behavior Therapy and Experimental Psychiatry (1970- ) and in a number of recent collected works such as Ullmann and Krasner (1965), Ulrich, Stachnik, and Mabry (1966),
Bijou and Baer (1967) and Sloan and McCauley (1968).

**Overview of Social Learning Theory.** In addition to the general orientation of applied behavioral analysis as exemplified within the above references, the present research will focus upon social learning theory and its application.

Bandura (1969) gives a concise definition of social learning theory, saying that so-called symptomatic behavior is viewed not as emotional disease manifestations but as learned reactions which can be modified directly by the provision of appropriate social models, and by the manipulation of response-reinforcement contingencies. Once behavior is altered, it is unnecessary to modify or remove an underlying pathology. Social learning refers to changes in behavior which occur as a function of contingencies which characterize social interaction.

The historical impetus for social reinforcement was the research of Greenspoon (1955). Prior to Greenspoon, it had been established that information about right and wrong responses when given by another person could function as selective positive reinforcement (e.g., Tilton, 1939). However, Greenspoon paved the way for research demonstrating that more subtle aspects of social interaction were potential reinforcers when systematically applied. Greenspoon (1955) demonstrated that if an interviewer said "uh huh" every time an interviewee used a plural noun, the frequency of the plurals could be significantly increased without the client's awareness of change. Following Greenspoon came a rapid succession of studies which investigated the effects of such social behaviors as a smile, attention, gestures, or verbal approval in controlling behaviors. It has been demonstrated adequately that such
social behaviors do indeed exert a strong controlling influence on the behavior of others. For example, in regard to children, a major tenet of social learning is that parents and other significant members of the social environment (teachers, peers, etc.) may shape and maintain some "deviant" child behaviors with social reinforcement (usually attention).

Studies with nursery-school-age children have demonstrated the effects of adult attention on maintaining such behaviors as isolation (Allen, Hart, Buell, Harris, and Wolf, 1964; Harris, Johnston, Kelly and Wolf, 1964; Johnston, Kelly, Harris, Wolf and Baer, 1964), regressed crawling (Harris et al., 1964), vomiting (Wolf, Risley and Mees, 1964), crying (Hart, Allen, Buell, Harris and Wolf, 1964), autistic behavior (Wolf et al., 1964), and aggressive responses (Patterson, Littman and Bricker, 1967). In the Allen et al. (1964) study, for example, observation by the experimenters demonstrated that the subject, a four-year-old female, most often engaged in isolate or solitary play which both attracted and maintained the attention of a teacher, while the child's social play with other children rarely did so. Utilizing extinction (total ignoring of isolate play) and positive reinforcement of incompatible desired behavior (social play with other children), the isolate play declined markedly while social play increased two to three times over baseline frequencies. Similar behavior modification procedures relying on social reinforcement were effective in altering the atypical behaviors noted in the other studies. Patterson et al. (1967), after collecting observation data for several years in well-run nursery schools, showed that the peer group provided immediate reinforcement for
approximately 70 per cent of the aggressive responses in that setting.

Observational studies in institutional settings for delinquents (Patterson, 1963; Furness, 1964; Buehler, Patterson and Furness, 1966) demonstrated that peer group social reinforcement maintained a high rate of deviant behaviors. Examples were verbal criticisms of staff, breaking rules, and destroying property. Reinforcing consequences of the delinquent group were verbal approval, agreement, interest, attention, smiling, and laughing. Data revealed that deviant responses were reinforced 70 to 88 per cent of the time by at least one peer.

There are also numerous studies which demonstrate that elementary teachers provide social reinforcement for disruptive classroom behaviors (e.g., Anderson, 1964; Grindley, 1964; Hotchkiss, 1967; Hall, Lund and Jackson, 1968; Becker, Madsen, Arnold and Thomas, 1967; Barrish, Saunders and Wolf, 1969; Madsen, Becker, Thomas, Koser and Plager, 1968; Thomas, Becker and Armstrong, 1968). Anderson (1964), for example, found a correlation of .80 between the rate of output of deviant behavior and the amount of time spent by the teacher at the desk of one deviant child. The Thomas et al. (1968) study demonstrated functional relationships between the classroom teacher's social behaviors and child behaviors. In that study, the teacher systematically varied her approving (praise, smiles, physical contacts, etc.) and disapproving (verbal reprimands, physical restraints, etc.) responses in a class of reportedly initially well-behaved elementary school children. Results indicated functional relationships between specified teacher and child behaviors.
As an aside, the classic study of Ayllon and Michael (1959) with psychiatric patients in institutional settings also demonstrated the functional relationship of social reinforcement and atypical patient behaviors. In a psychiatric hospital setting, Ayllon and Michael collected observational data which indicated that most undesirable behaviors of the patients were being maintained by the attention or social approval of the ward nurses toward those behaviors. After instructing the nurses in principles of behavior, primarily focusing on the techniques of extinction and positive reinforcement which the nurses later applied to selected cases, changes were noted in patient behaviors; there was a decline in bizarre behaviors and an increase in pro-social behaviors.

Finally, of late (1965-1972), there are several studies which demonstrate the influence of parental social reinforcement on child behaviors (e.g., Hawkins, Peterson, Schweid and Bijou, 1966; Patterson, Ray and Shaw, 1968). Patterson et al. (1968), for example, reported that ten hours of observational data in several homes indicated that families reinforced deviant behaviors on the average 30 per cent of the time.

While it is now commonly accepted that social reinforcements are strong influencers of child behaviors, it should be pointed out that research has disclosed factors contributing to significant individual differences in responsiveness to social stimuli.

Some research has indicated that the precise type of social reinforcement administered may vary in value for a particular child. For example, Zigler and Kanzer (1962) demonstrated that praise reinforcers
(verbal responses of good, fine) were more effective with lower-class than with middle-class children. Conversely, correct reinforcers (verbal responses of right, correct) were more effective with middle-class than lower-class children.

Characteristics of the person dispensing the social reinforcement may give variance to its value for the child. For example, the effectiveness of the person providing the reinforcers may be reduced if they are accompanied by critical or hostile behaviors regarding the child (Simkins, 1961; Sarason, 1965). Also, high prestige persons and those having more status are more effective than low prestige and low status persons in altering behavior (Prince, 1962). Further, in general, adult male social agents are more effective in altering the behavior of girls than boys and adult female agents are more effective in altering the behavior of boys than girls (Gewirtz and Baer, 1958; Stevenson, 1961; Stevenson and Knights, 1962; Patterson, Littman and Hinsey, 1964).

Considering the child, research has indicated that individual child characteristics may also contribute to the effectiveness of social reinforcement. The review by Stevenson (1965) pointed out that younger children were more responsive to social stimuli than older children. Also, the firstborn child tended to be more responsive to social influence than the later born children (Walters and Ray, 1960; Patterson et al., 1964; Patterson and Fagot, 1967). Children described as dependent are more responsive to social reinforcers than the independent child (Stevenson, 1965). Other studies relate that some children characterized as emotionally disturbed (Levine and
Simmons, 1962a), autistic (Lovaas, Freitag, Kinder, Rubenstein, Schaeffer and Simmons, 1964; Ferster, 1961; Straughan, 1965; Brick-er, 1965; Davison, 1965), and oppositional--that is, giving infrequent to nil compliance with adult requests (Wahler, 1969) are not responsive to social stimuli. Further, in general, children who have been referred to child guidance clinics for deviant behavior tend to be unresponsive to any adult social consequences (Levine and Simmons, 1962a, 1962b; Patterson, 1965; Patterson, Hawkins, McNeal and Phelps, 1967).

Patterson (1965b) has described methods of assessing a child's responsiveness to contingent social stimuli. For example, utilizing a two-holed marble box (described by Gewirtz and Baer, 1958), a baseline of the child's frequency of responses in dropping marbles through either of the two holes is generated. Then social reinforcement (of the experimenter, parent, etc.) is made contingent upon the child's dropping marbles through the originally non-preferred hole. The degree of behavioral change from the baseline rate to the rate for the reinforcement may provide a measure of the child's responsiveness to that agent.

Studies explicate that a child's responsiveness to social reinforcement may be increased by several techniques. For example, satiation effects for social reinforcers have been demonstrated for both young infants (Landau and Gewirtz, 1967) and older children (Gewirtz and Baer, 1958; Shallenberger and Zigler, 1961; Erickson, 1962; Stevenson and Knights, 1962). In such instances, it has been found that brief periods of social isolation or deprivation of social
contacts will enhance the value of social reinforcement (Gewirtz and Baer, 1958a, 1958b; Walters and Ray, 1960; Walters and Karol, 1960; Erickson, 1962; Stevenson, 1965).

Also, a number of studies have demonstrated that the technique of pairing primary (non-social) with secondary (social) reinforcers has increased social reinforcement effectiveness with children. For example, for increasing the value of social reinforcers in autistic children, Lovaas et al. (1964) used words as discriminative stimuli in an instrumental conditioning procedure in which food was used as a primary reinforcer. After a large number of pairings, the words alone of the experimenter were effective secondary reinforcers in shaping new appropriate behaviors. Patterson (1965a, 1965b) also stressed the importance of non-social reinforcers in enhancing the value of social reinforcement. Patterson (1965a, 1965b), in shaping new child behaviors in clinic settings, noted positive changes in the behavior of problem children when the therapists began dispensing large quantities of candies and pennies in conjunction with praise and approval for more appropriate behavior. At the end of treatment, he specified that the children were significantly more responsive to social reinforcers.

Summary of Theoretical Base.— From the foregoing, it may be concluded that general learning theory applications have proved themselves empirically valid in altering deviant child behaviors. Specifically, social learning theory has demonstrated the singular importance of significant social persons in the maintenance and change of child behaviors. While there are a variety of determinants producing broad individual differences in a child's responsiveness to social
reinforcers, the social reinforcement dispensed by significant others in the child's environment are strong potential influencers of child behaviors. Finally, there are effective ways of increasing the probability that social stimuli will function as reinforcement.

Suggested Implications of the Forgoing for Application.—Two approaches suggested for utilizing the preceding research knowledge have been: (1) a focusing on the environmental variables shaping and maintaining deviant child behaviors and a consequent restructuring of that environment; and (2) using the professional more efficiently by focusing on the nonprofessional in ameliorating child difficulties.

Patterson (1969) emphasized that the focus of behavioral applications, particularly social learning theory, should be upon reprogramming the social environment in which the child lives rather than upon the direct manipulation of deviant child behavior. As such, he sees a primary professional function as training significant others (parents, teachers, peers, etc.) in the applications of behavioral analysis. His major focus in training significant others is teaching techniques to decelerate the occurrence of deviant behaviors and to accelerate adaptive child behaviors.

Patterson's training method for parents involves a four-step program. The first phase takes about two weeks and involves the collection of baseline data and observation of familial interactions in the home. During this period, parents are given a programmed text (Patterson and Gullion, 1971) to familiarize themselves with principles and applications of learning. Next, the parents are taught specific procedures for counting and graphing target behaviors (Patterson states that in
general, parents initially tend to use vague language and are usually quite incorrect in estimating how often a particular behavior really occurs— the foregoing procedures are meant to overcome this deficit). During the second phase, parents are assigned to count some behavior occurring in the training session, such as the experimenter's touching his face, coughing, pauses in speech, number of "uhhs" vocalized, etc. At the same time, parents are assisted in pinpointing countable behaviors for change in their child. The third phase of the training program involves assigning a special hour each day that the parents are to count and record the incidence of pinpointed behaviors, observe the various consequences of the pinpointed behaviors, and note family members who provide the consequences. Parents are prompted for counting in the home by being told they will receive a phone call soon from the experimenter. Patterson states that usually two or three phone calls spaced over a period of several days are sufficient prompting and reinforcement for the parent's task of establishing accurate baselines. In the last phase, parents are aided through demonstration and supervised practice of techniques to alter reinforcement contingencies they provide for deviant and desired child responses. The data collected by the parents provide constant feedback during the intervention program. Patterson found it possible to train four to five families at a time in group sessions. Each session lasts two hours and involves five to fifteen weekly meetings. Criterion of success is set at parental altering of at least two child behaviors. One aspect of Patterson's training program is that he insists upon at least two adult family members actively participating in the program. This
second person might be the parent's spouse, an older child, or even a friend, neighbor or relative. The two adults can reinforce each other for changes made within the family.

Patterson (1969) further points out that variations in his basic program might be necessitated for severe problem children or very disorganized families. For example, the experimenter might have the parents use a tape recorder during periods of maximum family interaction, have the tapes analyzed by professional staff members regarding appropriate and inappropriate parental behaviors in carrying out the change programs, and offer alternative guides for parental responses. Further, Patterson states that in highly disorganized families the experimenters have had to go into homes to model appropriate interaction with children and actively supervise the parent's imitation of these behaviors in the home. A main point Patterson makes, however, is that for most cases, the parent rather than the experimenter may apply baseline observations and experimental manipulations in the home.

Walder, Cohen and Breiter (1969) describe three approaches for parent training in behavioral applications—educational groups, individual consultations, and controlled learning environments in homes.

The foregoing authors describe the purpose of the educational groups as teaching parents general principles of learning and how to perform functional analyses of behavior. They specify this as a four-step program, similar to Patterson. In the first phase (lasting approximately four weeks) parents are taught to observe and record child behaviors. Second phase (fifth and sixth weeks) involves individual consultative interviews in which parents are taught to identify a
three term contingency of behavior (i.e., antecedent events, observable behaviors, and consequent events). During the third phase (approximately eight weeks), parents engage in shaping new child behaviors in the home. The last phase (lasting two weeks) concerns a review of principles of behavior, case illustrations, and data from programs carried out in the homes.

Individual consultation approach overlaps with group education, as noted, during the second phase of the parent educational program.

The controlled learning environment is a technique for instituting behavioral applications in the home. In this instance, a professional observer goes into the home at pre-specified times and records parental attempts of carrying out child-change programs. Based on the observational data, parents are further instructed and guided in correct applications of principles. There is then a gradual phasing out of the experimenter's presence with more and more control for the change program given to the parents. The final goal is generalization of new appropriate parent-child behaviors beyond the experimental sessions in the complete absence of the experimenter.

A unique feature of the Walder et al. approach is that they specify assignments for the parents during the program and provide assistance contingent upon the completion of prior assignments by the parents. In this way, they hope to gradually increase the probability of independent behavior on the part of parents. For example, if the parent had not completed his previous week's assignment, the experimenter would reclarify that assignment and the present consultation would end.

Other professionals who train parents to be change agents for
their own children are Lindsley at the University of Kansas, Wahler at the University of Tennessee and Becker at the University of Oregon. While these programs are similar to the foregoing, some minor variations exist. Lindsley (1966), for example, was one of the first to note that the recording of behavior itself often produced dramatic changes in the frequency of the recorded behavior. Consequently, he emphasized hidden recording of behaviors by parents at first in order to establish accurate baselines.

Considering the above-mentioned training programs, Bandura (1962) made a point that the best use of professional time was in instructing others in the application of behavioral principles. The point has been reiterated since that time. Several books are devoted exclusively to the theme of professional use of the non-professional (e.g., Guerney, 1969; Tharp and Wetzel, 1969). One major advantage of this approach is a relief of mental health manpower problems.

The scope of mental health problems and critical shortages in professional personnel have long been a salient academic concern. For example, Albee (1959) noted the size of the mental health problem in the United States, citing such statistics as: (1) 10 per cent of the nation need help with emotional problems during any one year according to the Commission on Chronic Illness; (2) one half of all hospital beds in the United States are occupied by mental patients; (3) one out of ten babies now born will spend some time in a mental hospital; and, (4) about one-third of the total operating budget and of the capital outlay of some of the largest and wealthiest states is for hospitalization in state mental institutions. Albee (1968) further noted
increasing shortages of professional mental health manpower and new demands for use of professional personnel. According to Title 19 of Medicare, anyone defined as "medically indigent", along with their children, are eligible for outpatient psychiatric care and mental health services. National Institute of Mental Health has stated that by 1980, 2000 new comprehensive mental health centers will be built by Federal, state and local funds. There are plans for increasing mental health services for previously ignored parts of the population, such as the aged, inner-city poor, etc. Lindsley (1966) noted relevant numbers of mental health personnel available for children based on 1961 statistics. For example, there were about 3600 children for each psychiatrist, about 2400-2600 children for each psychologist, and about 1500 children for each nurse or social worker. On the brighter side, Lindsley (1966) noted that parents actually outnumbered children. He stated that for every adult in a household there was half a child, and that if parents could do something beneficial regarding the emotional growth of children, they should be the choice for professional work.

Gray (1963) also noted the problem of critical shortages of mental health manpower. She stated that such a trend would continue, especially considering the mounting population (i.e., the world population has doubled since 1900 and is expected to more than double again by the year 2000). Gray proposed two approaches for overcoming this problem. First, make use of the non-professional as much as possible. Second, devise new ways of working toward prevention and treatment of mental illness. Guerney (1969) also noted that professional manpower could not meet mental health needs through use of present methods and
he stressed that there was no reasonable hope that such manpower could be increased sufficiently to do so. Albee (1969) likewise asserted that traditional mental health methods could not meet the needs due to manpower shortages. He further indicated that development of alternative models of behavior could contribute significantly toward solving manpower problems.

Use of Parents in Intervention with Children: Psychoanalytic Orientations.— The involvement of parents in intervention of child difficulties began primarily in a psychoanalytic context. Such involvements have ranged from that of observer to principal therapeutic agent.

Freud (1909) presented one of the first case studies which involved the parent as therapist for his own child. Freud directed and instructed Little Han's father, who was solely responsible for carrying out the treatment program.

Other members of the psychoanalytic tradition have noted beneficial aspects for children by engaging the parent as observer. Elkisch (1935) stated that mothers who had observed him during therapy with the child were better able to model appropriate interaction behaviors as a result of the observational process. Schwarz (1950) asserted that he was forced to formulate his analytic interpretations more clearly so that they could be understood by both mother and child. Furman (1957) explained that while her therapeutic approach was still centered upon the child with the mother present, relying on the mother's unconscious closeness to the child was a significant aid in understanding and interpreting the parent-child interaction. Kolansky
(1960) pointed out that having mothers observe the therapeutic process was beneficial in maintaining the cooperation of the parents towards the child's therapy. Gordon (1963) referred to the advantageous aspects of the mother's presence in child therapy as an "insight jolt" (i.e., a sudden awareness on the part of both the mother and the child of what was really occurring on an unconscious level, after which more constructive efforts could be made in gaining a better parent-child relationship).

Psychoanalytic studies going beyond the parent as observer present the parent in more of a direct therapeutic role, similar to Freud's (1909) original case. Kubie (1937) reported on the resolution of a child's traffic phobia through conversations with his father, who was under the psychoanalytic guidance of the therapist. Ruben and Thomas (1947) relate that their therapeutic procedure with young children was initially to explain the nature of the children's difficulties to the mothers and gradually have the latter make appropriate psychoanalytic interpretations of their child's behavior themselves. Rangell (1950) indicated successful psychoanalytic treatment of nightmares in a seven-year-old boy through instructing the parents by letter on how to act as therapeutic agents. Bonnard (1950) focused upon the tremendous economy of the analyst's time in describing a case of treatment of a four-year-old child by the mother under his direction and further stated that in this way, the parent learns "truths" directly. Gero-Heymann (1955) reported on the successful psychoanalytic treatment of a young child's phobia by directing the mother to make up songs and draw pictures in order to elicit and show acceptance of the child's
anger toward her.

In some criticism of the foregoing studies, while the use of parents as therapeutic agents is commendable, the psychoanalytic base, as noted in the previously cited references, may be tenuous at best. Furthermore, traditionally, most psychoanalytic orientations have objected to the use of parents (or any significant other of the child) as therapists due to their lack of training and a notion that the natural relationship with the child precluded the necessary objectivity for any real psychoanalytic analysis. Additionally, traditional therapeutic theory and technique did not really tell a parent what to do explicitly in regard to changing a child's behavioral patterns.

On the other hand, there is now a wealth of data from applied behavior analysis which allows for specific, tangible techniques to change child behaviors. Also, the natural relationship of the parent (or other significant non-professional) with the child may be a factor in aiding behavioral changes.

Learning Theory Approaches to Utilizing Parents as Change Agents for Children. Learning theory approaches to utilizing parents as change agents for children have varied among specific techniques and location where environmental manipulations were instituted. For example, instructional or training techniques have fluctuated from letter or phone communications to actual manipulations of parental behaviors (e.g., through an experimenter's use of cueing or modeling appropriate behaviors for the parents). Place of behavioral manipulation has varied from a laboratory-clinic setting alone to a home setting alone. The following will review briefly some of the
relevant research articles in these areas.

**Laboratory-Clinic Setting:**

Russo (1964) reports two cases in which he had respective mothers watch behavior therapy sessions with their children and eventually conduct sessions themselves. Training basically involved three-way interaction (among therapist, child and mother) in a playroom setting with the mother gradually assuming greater treatment responsibility. The first case was that of a six-year-old female whose problem behavior consisted of severe temper tantrums. The treatment program consisted of extinction of the problem behavior and concurrent reinforcement of incompatible desirable behavior. Russo reported successful behavioral change after nine months of treatment. The time period was so lengthy, he states, because the mother had difficulty in correctly applying the extinction procedure as she continued to believe that all "bad" behaviors should be "punished". As such, she may have reinforced the inappropriate behaviors. The second case involved an eight-year-old male whose problem behaviors were listed as unintelligible speech and hyperactivity. Russo reports that the same extinction and reinforcement programs were effective for decelerating inappropriate behaviors.

Straughan (1964) replicated Russo's (1964) strategies. The subject was an eight-year-old female whose objectionable behaviors involved "telling lies", "tall tales", and "unhappy behavior" (mother's description). With the gradual introduction of the mother as the change agent, Straughan reports successful behavior modification.
Wahler, Winkel, Peterson and Morrison (1965) criticized the two foregoing studies, saying neither Russo nor Straughan demonstrated a functional analysis. Wahler et al. therefore utilized a reversal design (ABAB: A= baseline data, B= intervention data) to demonstrate an increase in probability that modification of the child's behavior was a function of the mother's contingencies. Before intervention sessions began, baseline data were collected by two observers who recorded mother-child interactions in the playroom setting. The experimenters further utilized a cueing procedure (by way of flashing lights) to signal the mother when and how to react to the child in the playroom. Before and after playroom sessions, mothers were given instructions on behavior modification techniques (primarily extinction and reinforcement of incompatible pro-social behaviors). The authors report the successful modification of deviant behaviors in three cases, all boys ranging in age from four to six years and stress that the experimental analysis demonstrated that the mothers' social behaviors (in the form of attention and approval) functioned as a powerful class of reinforcement for both deviant and pro-social child behaviors. Further, the mothers were easily trained as effective behavior modifiers for their own children.

Engeln (1968) reports another successful case of training a mother in operant techniques in a playroom setting. His technique was somewhat more elaborate than the foregoing, involving three behavior therapists and extending the assessment of reinforcement contingencies by observation in the home. The subject was a six-year-old boy whose behaviors consisted of violent temper tantrums, physical attacks on
people and excessive swearing. One therapist worked with the child in the playroom, utilizing basically extinction of deviant child behaviors and reinforcement (candy and social approval) of acceptable behaviors. Another therapist explained the operant techniques as they occurred to the mother who observed the playroom sessions through a one-way mirror. Following six such observations and instructional periods, the mother then entered the playroom sessions and began implementing the techniques herself. Later, an older brother was incorporated into the playroom sessions and such behaviors as cooperative play were the subject of the experimental program. Successful modification of the referred behaviors was reported after eleven months of weekly sessions. Engeln indicated that it took so long because at first the mother could not understand the concepts of operant conditioning even though they had been explained to her in detail— that she could learn them only through repeated experience and observations of concrete situations.

Regarding the foregoing studies in which retraining of the parent took place within a clinic-playroom setting, criticism has been voiced (e.g., O'Leary, O'Leary and Becker, 1967; Patterson and Brodsky, 1966) that such an approach does not afford assurance of generalization and persistence of treatment effects. Recent reviews by Mischel (1968) and Peterson (1968) point out that with the possible exception of intelligence and related cognitive abilities, behavior is highly specific to the situation in which it occurs. Behaviors established in a clinic setting may not generalize to the home situation if the reinforcement contingencies therein differ. Also, new behaviors established in the clinic may be short-lived if parents do not carry
their acquired knowledge beyond the clinic training periods. A number of studies have attempted to overcome these possible deficits by focusing treatment itself, or at least expanding it, beyond the clinic setting.

**Laboratory-Clinic-Home Setting:**

Wolf, Risley and Mees (1964) report the successful modification of a three-year-old male "hopeless" case who had been labeled autistic, psychotic, brain-damaged and severely mentally retarded. Parents pinpointed severe temper tantrums, sleeping problems, and refusal to wear glasses as major problem behaviors. Conditioning procedures (punishment in the form of time-out, extinction and positive reinforcement) were first instituted by ward attendants (under the direction of the experimenters) in the hospital setting where the subject resided and later transferred to the parents (concomitant with instruction in operant techniques) upon the subject's gradual re-entry into the home. Six months after discharge from the hospital, a follow-up inquiry revealed that the new appropriate behaviors were being maintained by the parents. A later follow-up inquiry (three years after initial intervention [Risley et al., 1967]) indicated that the parents had continued their use of behavior modification procedures and there were no further complaint behaviors for the subject.

Hewett (1965) describes an operant program of establishing vocalization and speech in a four-year-old autistic boy which involved hospital personnel and later the parents. The experimenter first established some speech in the subject using a structured teaching booth and such techniques as prompting, positive reinforcement (food and
candies) and brief periods of isolation for not responding appropriately to presented stimuli. Hewett then transferred the conditioning to hospital ward nurses and to the subject's parents who were gradually trained through observation and instructional sessions before instituting the procedures themselves. Upon the subject's release from the hospital, the parents continued the program in the home with a report of dramatic success. The child was later enrolled in a private nursery school whose staff reportedly noted no speech difficulties in him.

Allen and Harris (1966) report a mother's successful treatment of her five-year-old daughter who emitted excessive scratching, which had resulted in many open sores and scabs. Initial instruction and training of the mother was carried out in clinic-playroom sessions and gradually moved solely into the home setting. The primary techniques were extinction (ignoring of all scratching), positive reinforcement (social approval, attention and candies) during all non-scratching periods and a token reinforcement system (the child was given gold stars for increasingly longer time periods of not scratching herself; the stars could be traded for back-up reinforcers of trinkets, etc.) As scratching frequency subsided, the mother relied solely on social reinforcement. A six week follow up revealed no scratching behavior and all sores had been completely healed. The authors stress how this behavior appeared to be under the control of immediate social consequences in the form of the mother's attention.

Patterson and Brodsky (1966) relate a series of behavior modification programs for altering the multiple behavior problems of a five-year-old boy by the experimenters, parents and peers. The subject was
described as overly fearful, negativistic, extremely aggressive, and rejected by his peers. Treatment was initially conducted in a clinic setting wherein the mother observed experimental manipulations while the operant principles were explained to her. The program was then shifted to the home where the parents were worked with directly. The major techniques utilized were extinction and positive reinforcement. The program was further extended to the school setting where peer interaction was the manipulated behavior. The subject wore a box filled with candies and peers were instructed that if they talked with him, they would receive a piece of candy. Observational data collected by the experimenters in the clinic, home, and school revealed successful change for all referred behaviors. For example, in the school setting, initiations of interaction with the subject by peers increased nine to ten times over baseline frequencies and the subject's initiations of interactions with peers more than doubled.

Risley and Wolf (1967) describe the development of speech in an autistic six-year-old child in a clinic setting and an extending of the procedures into the home by training the child's mother. The mother first observed the experimenter's techniques—primarily positive reinforcement (food and social approval) for the subject's attempted speech and brief isolation for non-responding—and once the clinic experimental program had established some verbal repertoire in the child, the mother continued it at home. Marked success was reported.

Patterson, McNeal, Hawkins and Phelps (1967) report the successful modification of a five-year-old boy who was described as withdrawn, isolated, having frequent emotional outbursts and occasionally engaging
in the eating of feces. The experimenters first assessed the subject's responsiveness to the mother's social reinforcement and discovered it was severely lacking. The mother initially observed the experimenter (who first shaped the child's responsiveness to him through positive reinforcement of candies which could later be exchanged for toys) and gradually instituted the techniques herself. Further, the mother was instructed to take notes in the home which described the child's acceptable behaviors and the social reinforcements used to strengthen them (as a reinforcement for the parent, the experimenter subtracted one dollar from the clinic fee for each note turned in—within a few days, the parent "earned" thirty-six dollars). All observational data were collected in the home and the results indicated significant reductions and terminations of referred behaviors. In a six-week follow up, the child's responsiveness to the mother's social reinforcement was re-assessed and found to be significantly higher than that of the pre-intervention assessment.

Patterson, Ray and Shaw (1968) present observational data for six children, aged four to twelve years, demonstrating effectiveness in training parents, siblings, peers and teachers for altering the behavior of the identified deviant children. For example, in one case, the subject was a four-year-old boy who was characterized as exhibiting uncontrollable behaviors (severe temper tantrums, hitting of siblings), hyperactivity, negativism and stealing behaviors (taking candy and trinkets from stores). The experimental program was initiated in the clinic setting with the mother as observer. It began with the subject's cooperative responses with two other siblings present being
reinforced with candies (which were shared with the siblings and could be exchanged for trinkets, etc.). The mother then instituted the operant procedures in the home setting. After just four training sessions with the experimenter, the mother reported no further difficulties and a one month follow-up inquiry revealed a persistence of the child's appropriate behaviors.

Bernal, Duryee, Pruett and Burns (1968) describe the successful training of a mother in operant techniques regarding her eight-year-old son whose behaviors were extreme temper tantrums and violent physical assaultiveness on parents, teachers and peers. The experimental program involved therapist-mother interview sessions in which instruction on operant technology, behavioral record keeping, etc., took place and observation of mother-child interactions in both the clinic and home setting. Audiotapes and vidiotapes were taken of mother-child interaction in the home and used as instructional aids in the clinic. The mother reported successful modification for the referred behaviors, mostly by using extinction and positive reinforcement for pro-social behaviors, after twenty-five weeks of weekly instructional meetings.

The final section of literature review concerns research studies in which the focus of change in child behavior was entirely within the home setting. One classic study in this regard was Williams (1959).

Home Setting:

Williams (1959) instructed the mother of a twenty-one-month-old boy in operant techniques. The child's problem behavior was severe, tyrant-like, tantrums upon being put to bed each night. The mother had to remain in the child's room until he fell asleep. An extinction
procedure (leaving the child's room immediately after putting him to bed and ignoring tantrums) eliminated the tantrum behaviors within ten days; however, an aunt inadvertently reinforced the problem behavior one week later when the child complained upon her putting him to bed. The same extinction program again terminated the behavior within nine days and a two year follow up revealed no re-occurrence.

Boardman (1962) instructed parents of a five-year-old boy in operant techniques by telephone conversations. The boy's problem behaviors included lying, aggressive behaviors, and running away from school and home. While Boardman suggested a punishment contingency for the undesirable behaviors and a positive reward contingency for appropriate behaviors, the parents relied solely on the former. No observational-frequency data were reported, but the parents did indicate anecdotaly a successful elimination of the objectionable behaviors; an eleven month follow up revealed no re-occurrence of atypical behaviors in the child.

It might be pointed out that the foregoing study was severely criticized by Bandura (1962). Bandura stated that while he was in total agreement with Boardman's reliance on the parents as primary agents for the child's change, he was in extreme discord with the method (reliance on punishment alone) utilized. Bandura cites research evidence for the ineffectiveness of punishment in altering behavior. Bandura further noted unfortunate by-products which occurred in Boardman's subject, stating that the inappropriate behaviors were eliminated only after the severity of punishment reached almost physiologically intolerable intensities. He asserted that while a punishment contingency
could have been used in conjunction with positive reinforcement of prosocial behaviors in the child, a more fruitful approach would have been extinction concomitant with positive reinforcement of incompatible appropriate behaviors.

Lovibond (1963a) reports the successful training of parents in utilizing conditioning procedures for the treatment of enuresis. The subjects were thirty-six enuretic children, aged six to fourteen years. Treatment was supervised by phone conversations and home visits. A criterion for success was set at fourteen consecutive dry nights. All cases were reported as successful.

With another sample of sixteen enuretic children, aged six to fourteen years, Lovibond (1963b) again reported success in training the parents in correct application of conditioning procedures.

Lindsley (1966) added a new dimension to the literature regarding parental instruction or training in behavioral applications by utilizing fathers only in his parent groups. The subjects of study were fourteen retarded children. The program consisted of ten meetings of two hours duration in which the fathers were instructed in pinpointing deviant child behaviors, recording methods and home intervention tactics. Results indicated that five of the fathers made little attempt to try any of the techniques at home and of the nine that did, all were successful.

Hawkins, Peterson, Schweid and Bijou (1966) describe the case of a four-year-old boy in which successful behavior modification was carried out by the mother in the home. The child was described as being difficult to manage, disobedient, and having severe temper tantrums
which often involved the kicking of objects and people, tearing clothing and calling people names. Two observers collected baseline data of mother-child interactions in the home and noted that the child's undesirable behaviors may have been maintained by attention from the mother. The treatment program consisted of two to three sessions a week (one hour in length) in the home. Primary intervention techniques were positive social reinforcement for acceptable behaviors and time-out for unacceptable behaviors. The experimenters initially used gestural signals to indicate to the mother how she was to react to the child's current behavior. A reversal experimental design was utilized to demonstrate the functional relationship between the mother's behaviors and those of the child. The frequency data revealed a marked reduction in objectionable behaviors after forty-two sessions. A follow-up inquiry after twenty-four days indicated maintenance of pro-social behaviors and also generalization from the treatment hour to the remaining hours of the day.

O'Leary, O'Leary and Becker (1967) also utilized a reversal design to demonstrate the effectiveness of a mother's behavioral treatment of two male siblings, aged six and three years. Behavior of the children included frequent temper tantrums and fighting. The treatment program was carried out in the home by the mother and consisted of five months of sessions three times per week. After two observers gathered baseline data in the home, the experimenters initially conditioned cooperative play in the children using prompting, shaping, verbal instructions and positive reinforcement of candy and points (which could be exchanged for desired tangible objects). The change program was
gradually turned over to the mother, during which the experimenters
utilized hand signals to program appropriate behavior on her part.
Frequency data indicated successful results.

Gardner (1967) reports the case of a ten-year-old female whose
objectionable behaviors involved temper tantrums, frequent somatic com-
plaints and psychogenic seizures for which there had been determined no
organic basis. Due to the seriousness of the problems, baseline data
were only estimated by the parents and the treatment program was insti-
tuted immediately. The parents were instructed in behavior principles
and a treatment plan worked out during three weekly one-hour sessions.
After instruction in operant technology, the parents were encouraged
to devise the treatment plan as much as possible on their own accord.
(i.e., any verbalization of plausible, sound plans were reinforced by
the experimenter). The basic plan involved extinction and positive re-
inforcement of incompatible appropriate behaviors. Observational data
indicated a dramatic drop in referred behaviors. For example, within
two weeks of the treatment program, seizures were at zero frequency.
Follow up then involved a telephone call from the experimenter every
two weeks for thirty weeks. Parents were instructed to keep recording
the frequency of the behaviors. During the twenty-sixth week of the
follow-up period, the parents were instructed to utilize a reversal de-
sign by returning to their pre-treatment behaviors to demonstrate the
functional relationship between parental social reinforcement and de-
viant child responses. All referred behaviors rose dramatically in
frequency during the reversal period and were again decelerated with
a return to operant treatment procedures. Follow up a year later
revealed no re-occurrence of the decelerated behaviors.

Shah (1967) describes behavioral instruction to a mother regarding her four-year-old daughter, which was also part of a treatment program for the mother— that is, the mother's correct application of operant techniques radically altered her own "problem" behaviors. The child was described as sassy, frequently disobedient, enuretic, and often taking parental objects (such as the mother's jewelry which she usually broke). The mother emitted frequent outbursts of rage and often beat the child severely. The mother was given instruction in appropriate operant techniques and told to keep daily behavioral notes describing all interactions with the child. After one week of baseline, a specific change program was instituted. The major techniques were extinction, reinforcement (social approval and candies, pennies, etc.) of incompatible behaviors and time-out if the child became totally uncontrollable. The mother's behavioral notes indicated marked improvements in the child's behaviors and her own behavior toward the child by the second week of treatment. A follow up two years later revealed a continuance of pro-social behaviors in both the child and mother.

Zeilberger, Sampen and Sloan (1968) describe a case of successful behavioral instruction to the mother of a four-year-old boy whose behaviors included screaming, fighting, bossing and disobedience. After baseline data were collected in the home, the mother was instructed and guided in correct application of operant techniques during daily experimental sessions of one hour each lasting five and one-half weeks. The basic techniques utilized were extinction, positive reinforcement
(social and tangible objects, such as toys) for acceptable behaviors and use of time-out when the child became uncontrollable. A reversal experimental design was employed to assess results which indicated that all referred behaviors were brought under effective control by the mother's operant manipulations.

Wahler (1969) notes his previous research (Wahler, 1968) which pointed out that children defined as oppositional (i.e., refusing to comply with parental requests) are usually unaffected by the standard operant techniques of extinction of inappropriate behavior and positive reinforcement of incompatible pro-social behavior. Data suggested that use of a time-out procedure with such children would effect behavioral change and possibly concomitantly increase parental reinforcement value. Wahler (1969) reports data on two subjects testing these hypotheses. He utilized a reversal design and gave a test of parental reinforcement value (the marble-box technique described by Gewirtz and Baer, 1958) at the end of each baseline and experimental session. Baseline data were collected in the homes by two observers and focused on frequency of oppositional and cooperative behavior (specific compliant responses following parental requests or commands). The parents were given brief instruction in reinforcement and then presented specific programs (basically, the use of differential attention and time-out) to institute in the home. The subjects of study were two elementary school children, aged five and six, whose inappropriate behavior was defined as oppositional—refusal to comply with parental requests. The frequency data for both children indicated success with the parent's institution of the operant programs. Further, the tests
of parental reinforcement value demonstrated that value to increase significantly by the end of the treatment period— that is, the children became markedly responsive to the parent's social attention alone and the use of time-out was no longer necessitated.

Patterson and Gullion (1969) report two cases of successful training of parents in the application of operant techniques. The first case involved a four-year-old boy whose difficulties were defined as regressive behaviors— sucking, wetting the bed and frequent baby talk. It was indicated that the mother frequently yelled at the child for such behaviors. Following an introduction to operant techniques, the father was instructed to count the frequency of the mother's yelling behaviors. The mother counted frequency of the child's sucking and bed wetting behavior. The mother reported that the father's measurement was aversive to her, thus decelerating her yelling behavior to zero. After the establishment of a baseline for the child's behaviors, the parents utilized positive reinforcement (praise and points— traded for special privileges, candies, etc.) of incompatible appropriate behaviors. "Regressive" behaviors were eliminated within a few weeks. The second case involved two male siblings, aged four and six years. The boys were described as emitting frequent temper tantrums, being out of control, extremely active and refusing to obey the parents. Again, after the instructional program on operant techniques, the parents were effective in reshaping the deviant behaviors of their children. The primary techniques employed were positive social reinforcement and time-out procedures. Frequency data showed that behaviors were decreased within one week of treatment.
Mira (1970) reports an extensive, twenty-one month instructional program for parents in operant techniques. The program involved eighty-two different cases of children, ranging in age from eighteen months to sixteen years and presenting a wide variety of behavior problems. Parents were taught principles of behavioral modification in both group and individual sessions. For the most part, the children were never seen by the experimenters. The latter relied almost solely on the parents' records of child behavior and all operant programs were carried out in the home. The experimenters set certain contingencies to maintain parental involvement. For example, the "admission price" to an instructional session was the presentation of the prior week's record of the child behavior to be modified and if the parent missed three appointments, they were dropped from the program. The amount of time for parents to complete the behavior modification program ranged from one month of weekly sessions to eight months of weekly sessions; a criterion of success was set at the successful completion of two behavior modification projects. The overall results of the instructional program were that 46 per cent of the parents who came at least to one session successfully modified at least two child behaviors; 15 per cent only modified one child behavior, and then dropped from the program; and, 39 per cent demonstrated no recorded successful modification of child behavior—this latter group included such parents as those who came once and never again and those who simply stated that the child got better but presented no records. In regard to group versus individual parent sessions, Mira states that it was more costly to work with parents in groups than individually; that is, she asserts that
during the first six months of the program in which only group sessions were conducted, it took 3.9 hours of psychologist time for each successful behavior modification for parents trained in groups and only 2.1 hours for individually trained parents later.

Salzinger, Feldman and Portnoy (1970) describe an intensive two-year program involving fifteen parents of "brain-injured" children. In addition to a clinic-instructional program on operant technology, the authors made an analysis of possible variables contributing to success or failure of the parent to profit from the instruction; these variables were level of formal education of the parent and scores on two tests of knowledge (viz., a test of general verbal ability and a pre-post test on knowledge of operant conditioning principles). Before the instructional program began, mother-child interactions were assessed through observations in both the clinic and home settings. Then a lecture-discussion approach was utilized at the clinic, during which the parents were instructed in observation techniques and record keeping, conditioning principles and given reading material and specific operant programs to carry out with the child at home. The authors report that all the parents who actually carried out the modification programs in the home were successful in changing the child's behavior; they state that of those parents who did not carry out programs, some did not comprehend what to do and others simply made no attempts; of significant import, however, was that parental success and failure in carrying out the programs correlated directly with the parent's level of formal education and to performance on the two written tests—specifically, those parents of higher educational level tended to score
high on the tests and report success with the program, while with parents of lower educational level, the reverse occurred (i.e., they scored low on the tests and experienced failure with the program). The authors suggested that the latter group may have been successful if actual demonstrations in the home with direct individual training had been used. In general then, they assert that only some parents will profit from an instructional type program. Of some further importance, Salzinger et al. note that the home observations by experimenters to collect baseline and experimental data was soon terminated as they felt the same information could be gotten reliably from parental observational records and thus, professional time economized.

Hall, Cristler, Cranston and Tucker (1970) report successful modification of three different behaviors in a ten-year-old female through behavioral instruction and implementation by the child's mother. The pinpointed behaviors for change (in this case, acceleration) were music practice, campfire project work and reading. The authors note that while many of the previous studies in this area have relied on outside observers and experimenters, the mother in this case was prime observer of child behaviors and sole experimenter. The major technique utilized was the same contingency for all three behaviors (i.e., going to bed early for less than thirty minutes of time spent on the behavior). To assess results, a multiple baseline (across behaviors) design was utilized. After one week of baseline data collection, the contingency was applied to music practice for one week, then to campfire project work the next week and finally, to reading behavior the fourth week, the contingency being applied to each behavior successively. The
frequency data indicated that each behavior increased dramatically at the point where the contingency was applied and at the end of the experimental program, the mean time spent in all three behaviors was 1 hour, 28.75 minutes compared to only 28 minutes during the baseline period.

Implications of Theoretical Assumptions and Literature Review for the Present Research

The foregoing overview of learning (general and social) and the review of learning theory literature regarding the utilization of parents as change agents for their children has demonstrated a valid base for the present research. Such an approach, giving parents specific, proven techniques for altering child behaviors, should reduce significantly the "parental confusion" regarding child rearing methods, as noted in the Introduction.

The majority of studies noted beforehand were concerned with individual cases. In view of the current concern for mental health problems on a large scale and in consideration of mental health manpower shortages, the present author maintains that group approaches to parent instruction and training in operant techniques would be more economical and just as beneficial as individual approaches. While one study (Mira, 1970) did indicate that the group approach was more professionally time-consuming, no explicit reasons were given. Also, utilizing groups of parents may afford further benefits not possible with individual sessions. For example, as pointed out in the parent group discussion research, parents may tend to lose a sense of isolation due to their
sharing of common parental concerns.

A major concern of the present research will be more economic use of professional time. Many of the previously noted studies utilized professionally trained observers in the home. However, for purposes of economy, the present author contends that the parents themselves can be relied upon for accurate observational data collection following instruction in reliable methods. The author is in agreement with Lindsley (1966) who believed in allowing the parents to collect and report all child behavioral data with no outside intervention. Lindsley (personal communication, 1972) later asserted that sending an outside observer into the home for purposes of obtaining reliability checks was an "insult to parents" and a "violation of trust"; in effect, utilizing an outside observer may be communicating to parents that the experimenter lacks trust in the parent's ability to reliably record child behaviors and/or to report accurate measures of child behaviors to the experimenter.

The present author, however, feels that some type of reliability measures between independent observers is a necessity to ensure precise descriptions of child behaviors. Thus, a parent program in behavioral applications should include instructions in the use of independent observations. Reliability data could be in the form of having the parent utilize another family member (spouse, older child, etc.), relative, neighbor or friend to record independently observational data during all experimental conditions.

While the present author contends that the aforementioned type of reliability check should be sufficient to ensure accurate behavioral
descriptions, the possibility of parental bias remains a theoretical question. That is, as desired directions of child behavioral change would be obvious to a parent, it is possible that parental bias favoring desired outcomes may invalidate the results, particularly during later experimental periods. For example, suppose an experimental program successfully reduced the frequency of a child's hitting behavior but that the frequency of hitting behavior accelerated after several weeks. Might not a parent then tend to overlook instances of hitting behavior and continue recording reduced frequencies? To control for this possibility, observation and recording of child target behaviors could be done once during baseline and once during later experimental phases by a different independent, nonbiased observer each time. This second observer would be unaware of the experimental conditions in effect at the time of observation. If parental bias were indeed operating, the reliability coefficient would be significantly lower for the second observation (during experimental phases) than for the first observation (during baseline).

A further implication from the foregoing review regards group composition where group instructional-training approaches were noted; other than reference to Patterson's insistence upon some type of dyad for group membership (so the change agents could reinforce each other), no mention was found in the literature of specific group composition and effectiveness in altering child behaviors. Also, Lindsley (1966) was the only study utilizing fathers alone in the group; it appears that fathers have been largely ignored in all types of psychological research regarding children. The present research therefore will
attempt to vary group composition by utilizing mothers only, fathers only, and both mothers and fathers in separate instructional groups.

Regarding specific professional technique, a distinction should be made in relation to instruction or training in operant technology. The foregoing review has presented studies which have varied in this dimension, while the significance of the particular technique has only been alluded to. For example, some studies have relied basically on instruction in operant techniques, while others involved more direct training (such as through cueing and behavioral modeling). Again, in consideration of professional economy, the present research will focus on instruction in operant technology.

Another noted implication of the foregoing was reference to the need for variations in the usual instructional approach in certain instances. For example, Patterson referred to the need for specific techniques (such as use of a tape recorder and modeling of appropriate behaviors in the home) with severe problem children and very disorganized families. Salzinger found that level of formal education and performance on two verbal tests correlated significantly with the parent's effectiveness as a change agent. The reasonable conclusion appears to be that not all parents would be equally suited to a group-instructional approach. The present research, however, will make no attempt to differentiate types of children or the families who become involved in the group instructional programs. Possibly, "disorganized" families who did not profit from group instruction could be assisted by the experimenter outside the confines of the group.

The question of reinforcement or motivation for parental
behaviors was noted or at least alluded to in several studies. For example, Patterson indicated a prompting for parental counting of child behaviors by promising the parents a phone call (such, it appears, would serve as positive reinforcement from the experimenter). Patterson also noted the effectiveness of monetary reinforcement for parental behaviors— that is, his subtracting money from the clinic fee in recognition of the parent's efforts in the home. Walder noted making a contingency contract with the parents— that is, he specified that further experimenter assistance was forthcoming contingent upon the parent's completion of previously given assignments. Mira also noted similar contingency contracting in her approach. Other than occasional phone contacts, the Experimenter will use no other contrived reinforcers.

In addition to contrived motivators for parental performance, there are several built-in reinforcers present that one should be aware of. For example, it might be assumed that for most parents, seeing the behavior of the child improve (through their behavioral records) resultant of their efforts will be strong reinforcement for the parents' continued productivity in applying operant technology. Such reinforcement, however, will come only after the change program has been successfully initiated; therefore, social reinforcement (in the form of attention, approval, etc.) from the experimenter should be a significant part of his behavior from the beginning of the program. Another built-in reinforcer for parental behavior, especially for continuance—in applying appropriate operant techniques following termination of the experimental program, is what Patterson has referred to as the "ripple effect" or "chain reaction"— a phenomenon wherein
wide-range effects result in a person after the modification of just one or two behaviors; as an example, Patterson says that a child may become less "obnoxious" following a behavior modification program for one inappropriate behavior— as a result, the peer group begins to interact with him at a higher rate, which in turn results in the strengthening of a large number of socially adaptive behaviors in him which subsequently continues to increase and maintain a high rate of peer interaction. Patterson has noted similar beneficial "chain reactions" in whole family units when just one behavior of one child initially was altered by a behavior modification program. The Experimenter feels that it may be beneficial to attempt to derive some of the foregoing by-products through a post-questionnaire.

A final implication from the foregoing literature review concerns design. Most of the studies experimentally analyzing results utilized a reversal design. It is suspected that once parents have altered deviant child behaviors, they would not wish to reinstate those very behaviors simply for the benefit of research. Therefore, the present research will employ a multiple baseline design (Hall et al., 1970) to determine effectiveness of the program.
CHAPTER III
PROCEDURES OF THE STUDY

Selection and Description of the Sample

The parent groups of the study were solicited through a letter (Appendix A) sent by the Experimenter to all parents having children in the first, second or third grades of an elementary public school located in a semi-rural setting. The letter contained a general description for the purpose of the groups and a request for volunteer participants. Enclosed with the letter was a return slip (Appendix B) and a self-addressed, stamped envelope to be returned to the Experimenter. Appendix C lists the percentage by category of parent responsiveness to the solicitation letter. Of those parents that responded positively to the letter, parent group members were selected by a table of random numbers so that six members comprised each group; spouses in the father-mother group were considered one unit. As noted in Appendix C, no returned slips were checked by a father alone, so that a father only group could not be formed.

Initial parent contact from the Experimenter was made by phone, the parent was verbally reinforced (through a statement such as "I'm very glad you have expressed an interest in the parent program") for having responded positively to the letter and a time was set for a
brief introductory interview.

During the parent interview, the Experimenter re-explained the purpose of the program and answered any questions the parents had. The parents were assisted in pinpointing a few child behaviors that they desired to change. The importance of attending all six meetings was stressed by the Experimenter and final willingness to participate was secured from the parent. Finally, basic identifying data (name and age of parent, length of marriage, highest grade completed in school, occupation, size of family, name, birthdate, age and sex of target child[ren], and ages and sex of target child's[ren's] siblings) was gathered.

Of the six parents comprising each of the two groups, four in the mother and five in the both parent group completed the eight-week program. One mother in the former group attended no meetings, while one mother attended the first two meetings before discontinuing. One dyad in the both parent group dropped from the program after the first meeting. Of the nine members who completed the parent program, identifying data for each family are presented in Appendix D.

Socioeconomic status was estimated for each parent from Harris' (1970) adaptation of the 1960 Hodge-Seigel Prestige Scores. Prestige Scores on the Harris Scale range from 82 (Physician) to 09 (Bootblack—shoe-shine boy). Estimated socioeconomic status ranged from 7 (upper class) to 1 (lower-lower class). While the social status of a family has been considered to be reflected by the occupation of the husband rather than that of the wife, if both are employed (Reiss, 1960), this may not be so true at the present time (1972). Since 1960, female
labor-force participation has been increasing rapidly in all categories of jobs. Further, while occupation may still be considered a good measure of social status, other measures, such as multiple sources of income and level of educational attainment may, in an individual case, alter the social status rating for a particular family. In short, the socioeconomic status ratings, based on occupation of husband, for the nine parent group members may be considered only as estimates of social class.

Considering the two groups separately, the mother group (including descriptive data of husbands) had a mean age of 35 years, with a range of 29-41 years. All members were Caucasian. The mean length of marriage was 14.3 years and ranged from 12-15 years. The mean for the highest grade level attained was 14 (2 years of college) with a range of grade 10-20 (completion of medical school). (Numerical scores for grade level attainment ranged from 1 [completion of first grade] to 20 [completion of a professional school, such as Graduate or Medical School]. For example, a score of 8 would signify completion of eighth grade, a score of 10, completion of 2 years of high school, and so on). The husband's occupational prestige score had a mean of 45.3 with a range of 29-82. Estimated socioeconomic status ranged from lower middle class to upper class. The size of the family had a mean of 5.3 members and ranged from 4-9 members. Ages of target children had a mean of 8 years, 6 months with a range of 7 years, 2 months to 11 years. Sex of target children in the mother group involved 3 males and 2 females. The number of siblings of target children had a mean of 2 and ranged from 1-5 children. Ages of target child siblings had a mean of
9 years, 9 months and ranged from 3 years to 14 years. Sex of siblings involved 5 males and 3 females.

The both parent group had a mean age of 33.5 years, with a range of 28-37 years. All members were Caucasian. The mean length of marriage was 12.4 years. The mean for the highest grade level attained was 15.1 (3 years of college) with a range of grade 12-20 (completion of graduate school). The husband's occupational prestige score had a mean of 56.8 with a range of 37-78. Estimated socioeconomic status ranged from middle class to lower upper class. The size of the family had a mean of 5.2 members and ranged from 4-6 members. Ages of target children had a mean of 6 years, 9 months and ranged from 3 years, 10 months to 9 years. Sex of target children in the both parent group involved 4 males and 2 females. The number of siblings of target children had a mean of 2, with a range of 1-3 children. Ages of target child siblings had a mean of 6 years, 1 month and ranged from 1 year to 13 years. Sex of siblings involved 5 males and 5 females.

Considering mother group and both parent group together, mean parental age was 34.1 years, with a range of 28-41 years. Mean length of marriage was 13.2 years and ranged from 8-16 years. Mean for highest grade level attained was 14.6 years (2 1/2 years of college) with a range of grade 10-20 (completion of a professional school). The mean occupational prestige score was 51.7 and ranged from 29-82. Estimated socioeconomic status ranged from lower middle class to upper class. The size of family had a mean of 5.2 members and ranged from 4-9 members. Ages of all target children had a mean of 7 years, 7 months, with a range of 3 years, 10 months to 11 years. Sex of target children
involved 7 males and 4 females. Number of siblings of target children had a mean of 2 and ranged from 1-5 children. Mean age of target children siblings was 7 years, 8 months, with a range of 1 year to 14 years. Sex of all siblings involved 10 males and 8 females.

The foregoing descriptive data on parent group members are depicted in Table 1. While variability can be noted in the descriptive characteristics ascertained, the parent participants may be generally characterized as belonging to middle class small families, having stable marriages in terms of number of years married and educated beyond the general population as most had at least moderate college experience.

Procedures and Design of the Study

The procedures of the study involved formal instruction to two groups of parents (mother and both parent groups) in learning theory and applied behavioral analysis; the focus was on positive reinforcement of desired behaviors and effective use of social learning principles. The instructional program (Appendix E), standardized for both groups of parents, was presented by the Experimenter during the first two meetings. The instructional sessions involved six weekly, group meetings of approximately two-hour duration each. Printed outlines (Appendix F) of important points and directives were given to the parent participants at the first, second, third and sixth meetings. No other written material was provided the parents. The meetings extended from April 25 to June 1, 1972 and each was conducted in the evening in a classroom at the local elementary school building.

The first group meeting involved a reiteration of the purpose of
### TABLE 1
A TABLE OF IDENTIFYING DATA FOR ALL PARENT PARTICIPANTS AND THEIR CHILDREN

<table>
<thead>
<tr>
<th>Mother Group</th>
<th>Both Parent Group</th>
<th>Mother Group and Both Parent Group</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Mrs. A</strong></td>
<td><strong>Mrs. E</strong></td>
<td><strong>Mr. I</strong></td>
</tr>
<tr>
<td><strong>Mr. A</strong></td>
<td><strong>Mr. F</strong></td>
<td><strong>R. I</strong></td>
</tr>
<tr>
<td><strong>Mrs. S</strong></td>
<td><strong>Mrs. G</strong></td>
<td><strong>Mrs. I</strong></td>
</tr>
<tr>
<td><strong>Mrs. B</strong></td>
<td><strong>Mrs. H</strong></td>
<td><strong>Mrs. D</strong></td>
</tr>
<tr>
<td><strong>Mr. C</strong></td>
<td><strong>Mr. M</strong></td>
<td><strong>Mr. D</strong></td>
</tr>
<tr>
<td><strong>Mrs. C</strong></td>
<td><strong>Mr. N</strong></td>
<td><strong>Mrs. J</strong></td>
</tr>
<tr>
<td><strong>Mr. D</strong></td>
<td><strong>Mr. H</strong></td>
<td><strong>Mrs. J</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Name</th>
<th>Age</th>
<th>Length of Marriage</th>
<th>Marital Level Attained</th>
<th>Occupation</th>
<th>PR Score</th>
<th>Estimated SES (Class)</th>
<th>Size of Family</th>
<th>Target Child</th>
<th>Age</th>
<th>Sex</th>
<th>Number of Siblings</th>
<th>Age in Years</th>
<th>Sex</th>
</tr>
</thead>
<tbody>
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<td>15</td>
<td>16</td>
<td>Registered Nurse</td>
<td>82</td>
<td>Upper</td>
<td>4</td>
<td>Sandy</td>
<td>7-2</td>
<td>F</td>
<td>1</td>
<td>11</td>
<td>M</td>
</tr>
<tr>
<td>Mr. A</td>
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<td>20</td>
<td>10</td>
<td>Physician</td>
<td>82</td>
<td>Upper</td>
<td>4</td>
<td>Timmy</td>
<td>11-0</td>
<td>M</td>
<td>1</td>
<td>9</td>
<td>F</td>
</tr>
<tr>
<td>Mrs. B</td>
<td>29</td>
<td>12</td>
<td>10</td>
<td>Housewife</td>
<td>29</td>
<td>Lower Middle</td>
<td>9</td>
<td>Donald</td>
<td>7-7</td>
<td>M</td>
<td>5</td>
<td>13,11,8,3</td>
<td>M</td>
</tr>
<tr>
<td>Mrs. C</td>
<td>34</td>
<td>15</td>
<td>12</td>
<td>Bank Teller</td>
<td>29</td>
<td>Lower Middle</td>
<td>9</td>
<td>Keith</td>
<td>10-0</td>
<td>M</td>
<td>16</td>
<td>14</td>
<td>F</td>
</tr>
<tr>
<td>Mr. C</td>
<td>35</td>
<td>12</td>
<td>12</td>
<td>Fork Lift Driver</td>
<td>29</td>
<td>Lower Middle</td>
<td>4</td>
<td>Darla</td>
<td>7-11</td>
<td>F</td>
<td>1</td>
<td>10</td>
<td>F</td>
</tr>
<tr>
<td>Mrs. D</td>
<td>36</td>
<td>15</td>
<td>16</td>
<td>Registered Nurse</td>
<td>41</td>
<td>Middle</td>
<td>5</td>
<td>R. 54</td>
<td>Lower Middle</td>
<td>R</td>
<td>6</td>
<td>R. 4-6 No. M 3</td>
<td>R. 5</td>
</tr>
<tr>
<td>Mr. D</td>
<td>36</td>
<td>16</td>
<td></td>
<td>Time Keeping Clerk</td>
<td>41</td>
<td>Middle</td>
<td>5</td>
<td>M 45.3</td>
<td>to Upper</td>
<td>M. 3</td>
<td>M 6-6 No. F 2</td>
<td>M 2</td>
<td>M 5-9 No. F 3</td>
</tr>
<tr>
<td>Mrs. E</td>
<td>29</td>
<td>8</td>
<td>16</td>
<td>Real Estate Manager</td>
<td>53</td>
<td>Middle</td>
<td>5</td>
<td>Steve</td>
<td>7-1</td>
<td>M</td>
<td>2</td>
<td>5</td>
<td>M</td>
</tr>
<tr>
<td>Mrs. F</td>
<td>28</td>
<td>15</td>
<td>20</td>
<td>Housewife</td>
<td>78</td>
<td>Lower Upper</td>
<td>6</td>
<td>Becky</td>
<td>7-0</td>
<td>F</td>
<td>3</td>
<td>10,1</td>
<td>M</td>
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<td>Mr. F</td>
<td>35</td>
<td>15</td>
<td>13</td>
<td>College Professor</td>
<td>61</td>
<td>Middle</td>
<td>5</td>
<td>Peter</td>
<td>7-1</td>
<td>M</td>
<td>2</td>
<td>12,3</td>
<td>F</td>
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<td>Mrs. G</td>
<td>37</td>
<td>14</td>
<td>14</td>
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<td>37</td>
<td>Middle</td>
<td>6</td>
<td>Sally</td>
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<td>37</td>
<td>Middle</td>
<td>6</td>
<td>Daniel</td>
<td>8-10</td>
<td>M</td>
<td>3</td>
<td>7,4</td>
<td>M</td>
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<td>13</td>
<td>Building Contractor</td>
<td>35</td>
<td>Middle</td>
<td>4</td>
<td>Denny</td>
<td>9-0</td>
<td>M</td>
<td>1</td>
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<td>F</td>
</tr>
<tr>
<td>Mr. I</td>
<td>36</td>
<td>13</td>
<td></td>
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<td>Middle</td>
<td>5</td>
<td>R. 42</td>
<td>R. Middle to</td>
<td>R. 3</td>
<td>R. 6-9 No. M 4</td>
<td>R. 3</td>
<td>R. 13 No. M 5</td>
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<td>15</td>
<td></td>
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<td>50.8</td>
<td>Lower Upper</td>
<td>5</td>
<td>M 32.5</td>
<td>M. 5-2</td>
<td>M 6-9 No. F 2</td>
<td>M 2</td>
<td>M 5-8 No. F 6</td>
<td></td>
</tr>
<tr>
<td>Mr. I</td>
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<td>14</td>
<td></td>
<td>Housewife</td>
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<td>Middle</td>
<td>5</td>
<td>M 34.1</td>
<td>M. 5-2</td>
<td>M 7-7 No. F 4</td>
<td>M 2</td>
<td>M 7-5 No. F 9</td>
<td></td>
</tr>
</tbody>
</table>

* PR denotes Prestige
* R denotes Range Score
* M denotes Mean Score
the parent program, a discussion of Experimenter (group leader) and parent responsibilities, a description of reflex and operant behavior and formal instruction in describing, defining, observing, counting, recording and graphing behaviors. Reliability of observation was discussed and the parents were instructed to engage an independent, second observer (another family member, relative, friend, neighbor) in counting a child behavior at least one day of each week during the program. Thus it was the mother in the mother group and either the mother or the father in the both parent group who served as primary observer and recorder of all baseline and experimental data. The parents were also told that a student observer from Ohio State University would randomly observe a few of the parents' children during the program. These second independent observers were all second year graduate students in the School Psychology Graduate Training Program at the Ohio State University. One student independently observed and recorded child behavioral data during baseline and another student, during experimental periods. No student was aware of the experimental conditions in effect at the time of observation.

An attempt was made to have graduate student reliability checks for 50 per cent of the parents involved in the study. However, one parent in the mother group, who had a student reliability check during baseline, dropped from the program the second week and a wife in the both parent group was hospitalized during the later part of the program, making a second student observation impractical. In all then, three parents, or 30 per cent of the total parent group, were involved in student reliability checks during baseline and experimental conditions.
In view of the previous discussion regarding economy of professional time, no adaptation periods (acclimation of the parent and child to the student observer's presence) was utilized. However, as an aid to introducing the student observer to the home in as nonobtrusive a fashion as possible, to each observer was attached some functional role related to the home—this role was agreed upon by both the parent and the Experimenter beforehand. For example, several student observers were designated as "measurers" of some common household object—such as a measurer for new drapes or carpeting. One female student observer took advantage of some Girl Scout catalog books and pretended to peruse them while performing duration recording of the child's behavior. A male student observer pretended to be a surveyor of property while observing a child at play in the back yard of the house. Both the parent and student observers were instructed beforehand to display no interaction within the home and the student was instructed further to ignore any child who attempted interaction with him. It was reported by parents that in one instance a seven-year-old female target child surmised that the student was there to observe her behavior; in no other instances did this reportedly occur.

The first meeting also involved assisting each parent in pinpointing two child behaviors for change. For research purposes, an attempt was made by the Experimenter to pinpoint behaviors that would fit a multiple baseline design (Hall et al., 1970); that is, two or more different behaviors in the same child to be accelerated or decelerated by the same behavioral application, one behavior in the same child observed in different stimulus situations to be accelerated or decelerated.
by the same behavioral application, or the same behavior in two or more different children occurring in the same stimulus situation to be accelerated or decelerated by the same behavioral application. Appendix G lists the parental choices of child behaviors for change, the behavioral goals (to increase or decrease the behavior) and the behavioral change technique implemented. Child behaviors noted by eight of the nine parents fit a multiple baseline design. The remaining one parent, Mrs. C, chose a behavior for deceleration in one child and a different behavior for acceleration in another child so that an A-B design (A= baseline data, B= intervention data) was implemented for assessment purposes. An A-B design also had to be employed for two other parents (Mrs. D and Mr. and Mrs. H) for reasons discussed later. Further, Mr. and Mrs. G later changed the second child behavior in one child to a different behavior in another child; as such, their results only approximate a multiple baseline design.

As noted in Appendix G, child behaviors generally were not of a "severe" nature, at least by societal standards. However, except in perhaps one or two cases, they were a source of familial friction and may have led to greater problems. Also, a major purpose of the parent instructional program was to give the parents practice in behavioral applications which would continue to be useful at future times.

Most of the parents were vague and nondescript in their first attempts at pinpointing child behaviors, but with slight assistance from the Experimenter, arrived at countable behavioral descriptions. For example, Mrs. A described her child as a "procrastinator" in everything. This was easily reduced to the specific behavioral event of "time taken
to arrive at the breakfast table after being called by mother". Mrs. B stated that her child was extremely slow in performing all tasks around the house. This was reduced to the time taken for a daily chore (carrying out the trash) and the time taken to complete daily arithmetic homework assignments. For Mrs. C, the behavioral description of a "pouting, unhappy child" was altered to the number of smiles, laughs, or play initiations emitted by the child. From Mr. and Mrs. C's behavioral description of their child's "inability to concentrate" derived the number of written words misspelled during daily spelling homework quizzes administered by the father.

Finally, instruction during the first meeting concerned the time for instituting behavioral applications. The parents were instructed that experimental phases would begin when the baseline rate of the behavior was stable, ascending if the desire were to decrease the behavior or descending if the desire were to increase the behavior. Following the first meeting then, parents were given graph paper and began taking baseline data on the two child target behaviors in the home.

The second group meeting involved instruction regarding the influences of behavior, the various kinds of consequences that influence behavior and techniques for effectively using consequences to alter the frequency of child behaviors. Emphasis was placed on the use of positive behavioral applications and the importance of parental social behaviors. Also, possible questions (resistences) concerning the approach advocated by the Experimenter were discussed. The parents were then instructed to design a change program during the next week. It was pointed out that the program would be refined at the next meeting
and thereafter implemented.

The third meeting involved a review of the previous instruction and the administration and grading of a 25-item quiz (Appendix H) for review purposes. As some of the parents had not been obtaining reliability data, this was re-emphasized to them. Finally, the change programs the parents had devised were approved or refined by the Experimenter along with other parents in the group. Based on baseline data taken to that time, according to the instructions given in the first meeting, the parents were advised whether or not to begin implementation of their change program.

Meetings four and five involved integration and refinement of previous instruction and assistance in individual change programs being implemented.

During the sixth meeting, the Experimenter presented a summary of the program, considered future implications and gave instructions to the parents regarding a three-week follow-up program. The parents were instructed to continue recording and graphing child target behaviors for this three-week period following termination of the formal intervention program. The parents were provided with stamped, addressed envelopes to send behavioral graphs to the Experimenter weekly. Also, the parents were encouraged to design new change programs for any family member and implement them during the follow-up period. Finally, the parents were given a 9-item questionnaire (Appendix I) regarding qualitative aspects of the program and asked to mail that to the Experimenter within one week.

A final meeting was held after the three-week follow-up period.
During the final meeting, the major points of the entire program were discussed, follow-up data and any additional change programs were reviewed, there was open discussion of any related topics and closure of the program was made. A selected bibliography of pertinent reading materials was also given to the parents.

If a parent missed a group meeting, a make-up meeting was conducted by the Experimenter in the home. Table 2 indicates the number of meetings missed by parents participating in the program and denotes which of the seven meetings were missed by each parent.

**TABLE 2**

**NUMBER OF MEETINGS MISSED BY PARENT PARTICIPANTS**

<table>
<thead>
<tr>
<th>Name</th>
<th>Number of Meetings Missed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mrs. A</td>
<td>2</td>
</tr>
<tr>
<td>Mrs. B</td>
<td>0</td>
</tr>
<tr>
<td>Mrs. C</td>
<td>2</td>
</tr>
<tr>
<td>Mrs. D</td>
<td>1</td>
</tr>
<tr>
<td>Mr. &amp; Mrs. E</td>
<td>1</td>
</tr>
<tr>
<td>Mr. &amp; Mrs. F</td>
<td>2</td>
</tr>
<tr>
<td>Mr. &amp; Mrs. G</td>
<td>1</td>
</tr>
<tr>
<td>Mr. &amp; Mrs. H</td>
<td>3</td>
</tr>
<tr>
<td>Mr. &amp; Mrs. I</td>
<td>1</td>
</tr>
</tbody>
</table>

a Numbers in parentheses denote which of the seven meetings was missed.
Hypotheses of the Study

As previously stated, the primary concern of the present study was to investigate whether parent group instruction in behavioral applications would be an effective method for a parent's altering child behaviors. Thus, the independent variable was instruction to parents and the dependent variable was change in child behavior. Specifically, the major hypothesis of the study was that parent group instruction in behavioral techniques will prove effective for the parent's successful altering of two child behaviors in the home.

In regard to the question of parental bias affecting the validity of the results, it was contended that there will be no significant differences between reliability coefficients of primary parent observers and independent student observers during baseline and treatment phases.

The varied group composition (mother group, both parent group) was more of a theoretical question at this time. While the major hypothesis asserted that all parent participants would successfully meet the criterion of changing two child behaviors, it was a postulation that the process might be more facilitative with the both parent group; with the latter group, each member (husband and wife) could reinforce each other more easily due to joint association with the program, while with the mother only group, spouse involvement could only be anecdotal-ly ascertained. Therefore, it was an original intent of the Experimenter to attempt to assess any differential effects of the varied group composition. However, as the two groups were limited in size and a father group was lacking, no data comparisons between groups were made.
Treatment of the Data

The criterion of successful parental altering of two child target behaviors was assessed by multiple baseline design.

Multiple baseline design is a relatively new behavioral research design (Baer, Wolf and Risley, 1968). The multiple baseline is an elaboration of the older A-B design (A= baseline, B= experimental period) and its purpose is to demonstrate causality between change in behavior and experimental procedures. The A-B design could only establish whether a change in the level of a behavior had occurred and give an approximate indication of the magnitude of change, but it could not negate that the behavior may have changed without the implementation of the experimental procedures. While an A-B-A (reversal) design can demonstrate causality, it has been criticized because a major goal in behavioral research is to produce lasting improvements in behavior--behavioral improvements that continue to persist after experimental procedures are withdrawn. Also, the question of the reasonableness of requiring parents to revert to baseline procedures once they have successfully altered a child behavior enters in. The multiple baseline design does not necessitate reversal to baseline conditions and does at the same time demonstrate causality.

In a multiple baseline design, causality between change in behavior and experimental procedure is demonstrated in the following manner. Two different behaviors of a given individual are both measured at the same time. Once baselines on the behaviors are established, the experimental procedure is implemented on just one of the behaviors. A change in the level of that behavior is compared with the continuing
baseline measures of the other behavior. If the level of the latter behavior remains relatively constant, it is predicted that the experimental procedure was responsible for altering the level of the former behavior. The same experimental procedure is then implemented on the second behavior and if its level also changes in the desired direction at the time of implementation, causality for the experimental procedure is evident. The two other variations of the multiple baseline design were noted previously in the Design section.

As mentioned beforehand, multiple baseline design was employed for data from six of the nine parents involved in the study. For the remaining three, an A-B design was utilized. As indicated in the foregoing, statements of causality could not be made for these latter three parents, but an indication of successful change in child behaviors could be given.

The significance level of behavioral changes was not ascertained by parametric statistics, such as a t-test. According to Risley (1969), social considerations are involved in the evaluation of the magnitude of behavioral changes brought about by behavior modification procedures. Risley (1969) stated that in considering behavioral applications, the term "significance" refers to a comparison between the accomplished level of behavioral change and the level necessary for adequate functioning in our society; significance does not refer to a level of confidence that a change has occurred in comparison to a control condition or control group. Risley (1969) asserted then that the extent to which this level of behavioral change is approximated determines the "significance" of behavioral applications.
The data for all behavior change programs implemented during the five-week program are presented visually in graphic form (Figures 1-18). The graphic illustrations indicate the type of design employed (multiple baseline or A-B design), present frequency data and mean levels of behaviors and note reliability checks and days when no behavioral record was obtained.

Mean scores and range scores were obtained for all behaviors during baseline, the experimental period, the follow-up period and the experimental plus follow-up period. Mean score differences were obtained for all behaviors between baseline and the experimental period, baseline and the follow-up period and between baseline and the experimental plus follow-up period.

Reliability coefficients for independent observations were obtained for all reliability checks by dividing the record with the lower figure by the record with the higher figure and multiplying by a hundred.

Qualitative analysis of the parent group program was ascertained by the post questionnaire (Appendix I).
CHAPTER IV

FINDINGS

Results of the Study

The following will present the results of the study, considering each parent and his child's behavioral changes singly.

Figures 1 and 2 depict obvious success for Mrs. A in decelerating two behaviors in her seven-year-old daughter, Sandy. As noted in Table 3, the number of minutes taken by Sandy to arrive at the breakfast table decreased from 11.2 minutes during baseline to 3.5 minutes during the experimental period and to 1.4 minutes during the follow-up period. While there was one day (day 30) when the duration approached baseline mean, the follow-up graph portrays stabilization of the behavior at the maximal desired level. Table 4 depicts the mean score differences between baseline and the experimental, baseline and the follow-up, and baseline and the experimental plus follow-up periods. The second behavior, the number of Sandy's interruptions, decreased from 4.5 during baseline to 2.3 during the experimental period and to 0.9 during follow up.

While the second behavior did not extinguish, it decelerated significantly following experimental procedures. The multiple baseline design portrays explicitly that the change in both behaviors occurred
FIGURE 1. Records of the Number of Minutes Taken by Sandy to Arrive at the Breakfast Table During Daily Observation Sessions and of the Number of Times Sandy Interrupted Other Family Members During One Hour Observation Sessions.
Follow Up
For Figure 1

FIGURE 2. Records of the Number of Minutes Taken by Sandy to Arrive at the Breakfast Table During Daily Observation Sessions and of the Number of Times Sandy Interrupted Other Family Members During One Hour Observation Sessions.
### Table 3

A Table of Mean Scores and Range Scores for All Behaviors During Baseline, Experimental, and Follow-up Periods

<table>
<thead>
<tr>
<th>Behavioral Description</th>
<th>Number of Minutes to</th>
<th>Number</th>
<th>Mean Baseline Period</th>
<th>Mean Experimental Period</th>
<th>Mean Follow-up Period</th>
<th>Mean Experimental + Follow-up Period</th>
<th>Range Baseline Period</th>
<th>Range Experimental Period</th>
<th>Range Follow-up Period</th>
<th>Range Experimental + Follow-up Period</th>
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<tbody>
<tr>
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<td>1, 2</td>
<td>11.231</td>
<td>3.556</td>
<td>1.462</td>
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<td>9</td>
<td>3</td>
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<td>Set Table</td>
<td>1, 2</td>
<td>1, 2</td>
<td>4.536</td>
<td>2.334</td>
<td>0.945</td>
<td>1.143</td>
<td>7</td>
<td>2</td>
<td>4</td>
<td>4</td>
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<td>Set Table</td>
<td>3, 4</td>
<td>3, 4</td>
<td>24.858</td>
<td>1.850</td>
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<td>2.077</td>
<td>47</td>
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<td>9</td>
<td>9</td>
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<td>Complete Arithmetic</td>
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<td>36.077</td>
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<td>23</td>
<td>19</td>
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<td>21</td>
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<td>5</td>
<td>1.800</td>
<td>0.530</td>
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<td>0.530</td>
<td>4</td>
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</tr>
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<td>Number of Smiles, Laughs or Play Initiations</td>
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<td>6</td>
<td>0.350</td>
<td>0.667</td>
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<td>0.667</td>
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<tr>
<td>Number of Clothing Items</td>
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<td>7</td>
<td>4.118</td>
<td>1.056</td>
<td>1.056</td>
<td>1.056</td>
<td>11</td>
<td>5</td>
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<tr>
<td>Make Bed</td>
<td>8, 9</td>
<td>8, 9</td>
<td>5.923</td>
<td>5.096</td>
<td>5.155</td>
<td>5.122</td>
<td>6</td>
<td>3</td>
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<td>8, 9</td>
<td>4.087</td>
<td>2.200</td>
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<td>1.434</td>
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<td>0.347</td>
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<td>4</td>
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<tr>
<td>Make Bed</td>
<td>10, 11</td>
<td>10, 11</td>
<td>4.118</td>
<td>1.056</td>
<td>1.056</td>
<td>1.056</td>
<td>11</td>
<td>5</td>
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<td>0.500</td>
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<td>0.000</td>
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<td>3</td>
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<td>Number of Interruptions</td>
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<td>12, 13</td>
<td>6.429</td>
<td>8.000</td>
<td>2.334</td>
<td>3.143</td>
<td>8</td>
<td>5</td>
<td>5</td>
<td>10</td>
</tr>
<tr>
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<td>14, 15</td>
<td>5.143</td>
<td>3.625</td>
<td>7.000</td>
<td>4.889</td>
<td>15</td>
<td>5</td>
<td>5</td>
<td>10</td>
</tr>
<tr>
<td>Number of Objects Taken</td>
<td>14, 15</td>
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<td>1.334</td>
<td>0.039</td>
<td>0.000</td>
<td>0.000</td>
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<tr>
<td>Number of Verbal Responses</td>
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<td>0.000</td>
<td>0.000</td>
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<td>1</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Number of Commands</td>
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<td>6.530</td>
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<td>2.375</td>
<td>2.375</td>
<td>34</td>
<td>12</td>
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</tr>
</tbody>
</table>
TABLE 4
A TABLE OF MEAN SCORE DIFFERENCES BETWEEN BASELINE AND EXPERIMENTAL AND FOLLOW-UP PERIODS*  

<table>
<thead>
<tr>
<th>Behavioral Description</th>
<th>Number of Figure</th>
<th>Baseline/Experimental Period</th>
<th>Baseline/Follow-up Period</th>
<th>Baseline/Experimental + Follow-up Periods</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Minutes to</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Arrive at Table</td>
<td>1,2</td>
<td>+ 7.675</td>
<td>+ 9.769</td>
<td>+ 8.912</td>
</tr>
<tr>
<td>Number of Interruptions</td>
<td>1,2</td>
<td>+ 2.202</td>
<td>+ 3.591</td>
<td>+ 3.393</td>
</tr>
<tr>
<td>Number of Minutes to</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Carry Out Trash</td>
<td>3,4</td>
<td>+23.008</td>
<td>+22.542</td>
<td>+22.781</td>
</tr>
<tr>
<td>Number of Minutes to</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Complete Arithmetic</td>
<td>3,4</td>
<td>+12.362</td>
<td>+ 4.577</td>
<td>+ 7.782</td>
</tr>
<tr>
<td>Number of Hits, Pushes,</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Object Takes or Name Calls</td>
<td>5</td>
<td>+ 1.270</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of Smiles, Laughs or Play Initiations</td>
<td>6</td>
<td>+ 0.317</td>
<td></td>
<td></td>
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<tr>
<td>Number of Clothing Items</td>
<td>7</td>
<td>+ 3.062</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of Minutes to</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Make Bed</td>
<td>8,9</td>
<td>+ 0.827</td>
<td>+ 0.773</td>
<td>+ 0.801</td>
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<tr>
<td>Number of Minutes to</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Carry Out Trash</td>
<td>8,9</td>
<td>+ 1.887</td>
<td>+ 3.037</td>
<td>+ 2.653</td>
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<tr>
<td>Number of Clothing Items</td>
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<td>+ 1.010</td>
<td>+ 1.038</td>
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<tr>
<td>Number of &quot;Silly&quot;</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Verbalizations</td>
<td>10,11</td>
<td>+ 0.738</td>
<td>+ 0.738</td>
<td>+ 0.738</td>
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<tr>
<td>Number of Misspelled Words</td>
<td>12</td>
<td>+ 3.250</td>
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<td></td>
</tr>
<tr>
<td>Number of Interruptions</td>
<td>12,13</td>
<td>+ 0.429</td>
<td>+ 6.095</td>
<td>+ 5.286</td>
</tr>
<tr>
<td>Number of Temper Tantrums</td>
<td>14,15</td>
<td>+ 1.518</td>
<td>- 1.857</td>
<td>+ 0.274</td>
</tr>
<tr>
<td>Number of Objects Taken</td>
<td>16,17</td>
<td>+ 1.295</td>
<td>+ 1.334</td>
<td>+ 1.309</td>
</tr>
<tr>
<td>Number of Verbal Responses</td>
<td>18</td>
<td>+ 2.334</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of Commands</td>
<td>18</td>
<td>+ 4.155</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* + denotes change in preferred direction  - denotes change in undesired direction
at the time of experimental implementation.

For Mrs. A's three reliability checks, in which her husband served as second independent observer, the percentage of agreement was 100 per cent in each. Concerning the paucity of Mrs. A's reliability checks, she stated that her husband, a physician, was usually not at home during the time of daily observation and that there was no one else she could employ.

In regard to experimental procedure, as Mrs. A employed both social reinforcement in the form of praise and a token system, it could not be ascertained to which procedure the altered behaviors were more responsive. Mrs. A's token system involved giving two poker chips for arriving at the table within five minutes after being called and for emitting no more than two interruptions during the dinner hour. The tokens could be traded daily for small toys, boxes of coloring crayons, or extra television time.

Figures 3 and 4 depict successful behavioral applications by Mrs. B on two behaviors in her eleven-year-old son, Timmy. The number of minutes to carry out the trash decreased from 24.8 during baseline to 1.8 during the experimental period and 2.3 during follow up. As noted, the behavior stabilized and remained at the low level throughout experimental and follow-up periods. The acceptable time for Timmy to be able to complete his daily arithmetic homework assignment was set at 30 minutes. This behavior decreased from a mean of 36 minutes during baseline to 23.7 minutes during the experimental period and 31.5 minutes during follow up. Again it may be stated that the multiple baseline clearly indicates causality between altered behaviors and
FIGURE 3. Records of the Number of Minutes Taken by Timmy to Carry Out the Trash and to Complete His Arithmetic Homework Assignment During Daily Observation Sessions.
FIGURE 4. Records of the Number of Minutes Taken by Timmy to Carry Out the Trash and to Complete His Arithmetic Homework Assignment During Daily Observation Sessions.
experimental procedures.

For her reliability checks Mrs. B utilized a neighbor who was also a teacher at her son's school. The percentage of agreement for seven reliability checks was 100 per cent. The percentage of agreement with student observers was also 100 per cent for each observation.

Regarding experimental procedures, Mrs. B utilized praise and a token system. Mrs. B made paper slips on which she pasted stars. Three coupons were given Timmy for desired levels of behavior and they could be traded for a variety of material and activity consequences. Mrs. B's token list is included in Appendix J.

It might be pointed out here that Figure 3 represents the ideal carrying out of the Experimenter's instructional program. The program was so structured that in utilizing a multiple baseline design, the experimental manipulation was employed on the first behavior immediately following group meeting two (day 14) and on the second behavior, immediately after the third meeting (day 21).

Mrs. C administered behavioral applications to two of her children. Figure 5 presents a record of the number of times her ten-year-old son, Keith, hit, pushed, took away objects or called another child a derogatory name during one-hour observation sessions. The mean frequency was 1.8 during baseline and .5 during the experimental period. While the change in behavior following experimental manipulation is in the desired direction, it might be pointed out that the change itself is relatively small and the A-B design does not warrant any statements of causality. Mrs. C did not obtain any follow-up data on this behavior, stating she was too busy during this period.
FIGURE 5. A Record of the Number of Times Keith Hit, Pushed, Took Away Objects or Name-Called Another Child During One Hour Observation Sessions.
For reliability checks, Mrs. C used her fourteen-year-old daughter. The percentage of agreement with two independent observations was 100 per cent.

Mrs. C's experimental manipulation consisted of praise and a token system. She rewarded Keith with plastic discs which could be traded daily for activity consequences (staying at a friend's house overnight, watching television, going out to play), material consequences (toys), and biological consequences (pieces of candy).

Figure 6 presents a record of the number of times Mrs. C's seven-year-old son, Donald, smiled, laughed or initiated play with another child during one-hour observation sessions. The mean frequency of these behaviors was .3 during the baseline and .6 during the experimental period. As with Keith, due to the A-B design and relatively small behavioral change, no statement of causality can be made. Follow-up data were also lacking for this behavior.

Two independent reliability checks with Mrs. C's fourteen-year-old daughter yielded 100 per cent agreement.

Mrs. C employed the same experimental manipulation with Donald that she used with Keith.

As noted in Appendix G (description sheets), Mrs. D began obtaining baseline data on two behaviors of her seven-year-old daughter, Darla. Regarding Darla's second behavior, instances of verbal and physical "aggressiveness" toward her older sister, Mrs. D obtained baseline data through day 35. From day 1 through day 10, during 45-minute observation sessions, the frequency of the behavior was zero each day. Mrs. D then switched to 24-hour observation sessions and, to day 35,
FIGURE 6. A Record of the Number of Times Donald Smiled, Laughed or Initiated Play With Another Child During One Hour Observation Sessions.
the behavior ranged from zero to 5, with a mean of 1.857. At meeting six, Mrs. D stated intentions of carrying out experimental manipulation on the above behavior during the follow-up period. However, at the final meeting, after follow up, Mrs. D said she was too busy to record behaviors during follow up and that she therefore had not instituted behavioral manipulation on the foregoing behavior; consequently, a record of that behavior is not included in the data.

Figure 7 portrays a record of the number of clothing items Darla left anywhere but the clothes chute during daily observation sessions. The A-B design indicates a clear change in the level of the behavior following experimental manipulation. The behavior changed from a mean of 4.1 during baseline to 1 during the experimental period. While there was no follow-up period, the behavior had stabilized at zero frequency for the last five days of the experimental period. At the final meeting, Mrs. D reported no re-occurrence of the behavior. A total of three reliability checks were made by a neighbor of Mrs. D Agreement was 100 per cent on all occasions.

Mrs. D's experimental manipulation consisted of praise and the putting of colored stars on a chart hanging in the kitchen. At the end of the week Darla earned a penny for each star on the chart.

Figures 8 and 9 depict successful behavioral applications for Mr. and Mrs. E in decelerating two behaviors in their seven-year-old son, Steve. The E's had stated that there existed no serious problems in any of their children, so they chose two daily chore behaviors in order to gain experience in applied behavior analysis. The first behavior, number of minutes taken by Steve to make his bed, had a mean of 5.9
FIGURE 7. A Record of the Number of Clothing Items Darla Left Anywhere but the Clothes Chute During Daily Observation Sessions.
FIGURE 8. Records of the Number of Minutes Taken by Steve to Make His Bed and to Carry Out the Trash During Daily Observation Sessions.
FIGURE 9. Records of the Number of Minutes Taken by Steve to Make His Bed and to Carry Out the Trash During Daily Observation Sessions.
during baseline, 5 during the experimental period and 5.1 during the follow-up period. The second behavior, number of minutes taken by Steve to carry out the trash, had a mean of 4 during baseline, 2.2 during the experimental period and 1 during the follow-up period. The multiple baseline suggests causality in the behavioral changes being resultant of experimental manipulations. Follow-up data, in particular, show that both behaviors had stabilized at the optimal levels.

Mrs. E served as primary observer and recorder of behaviors. Mr. E served as second independent observer for six reliability checks. In all cases, the records were in complete agreement. Two independent observations by student observers, one during baseline and one during the follow-up period, yielded agreements of .50 during baseline and 100 percent during follow up.

Mr. and Mrs. E used the experimental manipulation of praise in conjunction with showing Steve his daily graph. Acceptable level for making the bed was set at five minutes and for carrying out the trash, two minutes. As noted, Steve reached the optimal levels in both instances.

Figures 10 and 11 depict Mr. and Mrs. F's behavioral applications on two behaviors in their seven-year-old daughter, Becky. The first behavior, number of clothing items not in the proper place by bedtime, had a mean of 1.3 during baseline and .3 during both the experimental and follow-up periods. The second behavior, number of "silly" verbalizations, had a mean of 1.2 during baseline and .5 during both the experimental and follow-up periods. While extinction of neither behavior occurred, the records indicate marked behavioral improvement
FIGURE 10. Records of the Number of Becky's Clothing Items not in the Proper Place by Bedtime During Daily Observation Sessions and of the Number of Becky's "Silly" Verbalizations During One-Half Hour Observation Sessions.
FIGURE 11. Records of the Number of Becky's Clothing Items not in the Proper Place by Bedtime During Daily Observation Sessions and of the Number of Becky's "Silly" Verbalizations During One-Half Hour Observation Sessions.
following experimental manipulation. The multiple baseline suggests
causality between behavioral change and experimental manipulation as
both behaviors decelerated at the point of experimental implementation.

Mrs. F served as primary observer and recorder of behaviors,
while Mr. F served as second independent observer on six occasions.
Three reliability checks for the first behavior all yielded 100 per
cent agreement. For the second behavior, three reliability checks
yielded agreements of .50, .01 and .01. Mr. F stated that on both oc­
casions of low agreement, his recording had been more "lenient" than
his wife's and that the latter should be considered the more accurate
of the two. It appears, however, that their consensus regarding what
constituted a "silly" verbalization was somewhat disparate. One stu­
dent reliability check during baseline on the first behavior yielded
an agreement of .80. As noted beforehand, there was no second student
observation during experimental phases due to Mrs. F's illness and hos­
pitalization.

Mr. and Mrs. F's experimental manipulations involved praise plus
putting gold stars on a chart located in the kitchen. Small candy
pieces could be earned at the end of the week based on the number of
stars Becky had accumulated. Mr. F had bought a "goodie box" for Becky
to save her candy in and he stated that this tactic itself proved very
reinforcing to her.

Figure 12 portrays records of the results of behavioral applica­
tions for two children of Mr. and Mrs. G. The G's originally were tak­
ing baseline data on two behaviors in their seven-year-old son, Peter.
However, after two weeks of daily 2-hour data gathering on the second
FIGURE 12. Records of the Number of Written Words Peter Misspelled During Forty-Five Minute Observation Sessions and of the Number of Times Sally Interrupted Other Family Members During One Hour Observation Sessions.
behavior, verbal and physical "expressions of anger", they were obtaining no record—the behavior remained at zero frequency throughout. Therefore, on the 15th day of the program, the G's began taking baseline data on the number of times their three-year-old daughter interrupted other family members during one-hour observation sessions. As the same experimental manipulation was employed with both children, baseline and experimental periods are portrayed in a multiple baseline design.

The first behavior, number of written words (out of 10) that Peter misspelled during daily sessions with his father had a mean of 3.2 during baseline and zero during the experimental period. There was no follow up as that period began the last week of school and Mr. G stated that Peter had no spelling homework at that time. It had been suggested to Mr. G by the Experimenter that he contrive a list of words for the follow-up period from previous word lists. However, he felt that this was impractical and also stated that Peter was briefly incapacitated during follow up due to a tonsilectomy. It should be pointed out that Mr. G appeared rather lackadaisical throughout the program; the extreme number of no record days tends to support this contention.

The second behavior, number of Sally's interruptions, had a mean of 8.4 during baseline, 8.0 during the experimental period and 2.3 during the follow-up period (Figure 13). As noted in Figure 12, the experimental period consisted of only three days; the experimental manipulation appeared to take effect on the fifth day after experimental manipulation. Perhaps the young age of the subject (three years) accounts for this delay of effect. Also, the G's were using shaping to decrease the level of the behavior. They began instituting reward at
FIGURE 13. A Record of the Number of Times Sally Interrupted Other Family Members During One Hour Observation Sessions.
the mean baseline level of the behavior. It may be stated in general that both behaviors were responsive to the experimental intervention.

As noted in the data, the G's performed only one reliability check during the entire program. Mr. G felt that reliability checks were not necessary for the first behavior, Peter's misspellings, since it was such a discrete, easily discriminative stimulus. After encouragement from the Experimenter, they did perform the one check on the second behavior. Mrs. G was primary observer and recorder for that behavior and Mr. G served as second independent observer. The percentage of agreement was .91.

The experimental manipulation used by the G's was praise, candy and a monetary bonus. For Peter's behavior, his father assisted him in studying weekly 10-word spelling lists and gave him a nightly quiz on the words. For each word correct, Peter received a small piece of candy and if he scored 90 per cent or above on the Friday quiz, he received the candy plus a 10¢ bonus.

Sally likewise received small pieces of candy for specified periods of non-interrupting during the dinner hour and also received a monetary bonus if interruptions were below three.

Mr. and Mrs. H applied behavioral techniques to two behaviors in their eight-year-old son, Daniel. As they implemented experimental techniques at the same time on both behaviors, the data are presented in an A-B design.

The first behavior, number of Daniel's temper tantrum behaviors (Figures 14 and 15), had a mean of 5.1 during baseline, 3.6 during experimental periods and 7.0 during follow up. Obviously, this behavior
FIGURE 1A. A record of the number of Daniel's temper tantrum behaviors during one-half hour observation sessions.
FIGURE 15. A Record of the Number of Daniel's Temper Tantrum Behaviors During One-Half Hour Observation Sessions.
was not responsive to the experimental manipulation utilized. Also, even if the behavior had stabilized at a low level, there could be no statements of correlation as the baseline was descending at the time of experimental implementation.

The second behavior, Daniel's taking of objects that did not belong to him (Figures 16 and 17), had a mean of 1.3 during baseline, .03 during experimental periods and zero during follow up. While the data suggest responsiveness to experimental manipulation, this appeared not to be the case. First, the baseline was descending at the time of experimental manipulation. Second, the H's reported that shortly after the Experimenter's home interview visit, Daniel "confessed all" in regard to his stealing behaviors. Daniel had asked his parents if the Experimenter was a law officer coming to take him away. The parents stated that previously they had told Daniel that if he kept stealing things, the sheriff would come to get him. As noted by the data, stealing, initially reported by the H's as the major problem of concern, ceased to exist.

In regard to the above, it should be noted that the H's deviated from the instructional program. As mentioned in the section on procedures of the study, parents were only to devise a change program during the second week and review it with the Experimenter and other parents at the third meeting (day 14). The H's, however, implemented their change program on day 9. They then missed the third meeting. It wasn't until the make-up meeting (day 18) that the Experimenter discovered their premature experimental implementation.

Mrs. H served as primary observer and recorder for both child
FIGURE 16. A Record of the Number of Objects not Belonging to Him that Daniel Took During Daily Observation Sessions.
Follow Up
For Figure 16

* Reliability Checks
DAYS
-----Mean

FIGURE 17. A Record of the Number of Objects not Belonging to Him that Daniel Took During Daily Observation Sessions.
behaviors. Mr. H was a second independent observer on 13 occasions. Agreement was 100 per cent eight times and reliability checks on the five other occasions yielded agreements of .88, .85, .89, .75 and .50.

Regarding the experimental manipulation, the H's first devised a token system in which Daniel could earn tokens valued at 50¢ each. He was told that once he had earned $40 worth of tokens, he could turn them in and the parents would buy him a bicycle of his choice. During the make-up meeting (day 18), the parents reported that after one day, Daniel did not respond to the token system. He even refused to accept the tokens when given to him by his parents. The H's were then assisted in bringing "immediacy" into the token system. They contrived a list of activity, material, and biological consequences that tokens (small slips of paper) could be daily exchanged for. The parents were also instructed to pair much social reinforcement (praise) with the giving of the tokens. This second token system plus praise was instituted on day 18 of the program.

Figure 18 portrays behavioral manipulations by Mr. and Mrs. I on two behaviors in their nine-year-old son, Denny. The first behavior, the number of Denny's persistent verbal responses after being told "no" by his parents, had a mean of 2.3 during baseline and zero during the experimental period. The second behavior, number of commands Denny gave to other children or parents, had a mean of 6.5 during baseline and 2.3 during the experimental period. There was no follow up for either behavior. The I's were on vacation during the follow-up period.

As both behaviors were descending during baseline at the time of experimental intervention, it cannot be stated with certainty that the
FIGURE 18. Records of the Number of Times Denny Emitted Verbal Responses After Being Told "No" by His Parents During One-Half Hour Observation Sessions and of the Number of Authoritative Commands Denny Gave to Playmates or Parents During One Hour Observation Sessions.
causative factor was the behavioral technique employed. However, as both behaviors stabilized at low levels following experimental manipulation, it can be reasonably assumed that the I's experienced success with their behavioral applications.

Mrs. I served as primary observer and recorder of both behaviors. Mr. I was a second independent observer on two occasions for the first behavior. Agreement was 100 per cent in both instances. Student reliability checks on the second behavior yielded agreements of .69 during baseline and .35 during the experimental period. When Mrs. I was asked about the marked discrepancy in the latter reliability data, she remarked that in addition to obvious commanding behaviors given to others (e.g., "go get me a shovel"), Denny interspersed many "requesting" behaviors (e.g., "please get me a glass of water"); Mrs. I stated that she did not include the requesting behaviors in her count while she assumed that the student observer did. Mrs. I indicated at the end of the program that commanding behaviors per se were markedly reduced from the original baseline level.

The experimental procedure employed by the I's was time-out and positive social reinforcement (praise) for behaviors incompatible with the target behaviors. The time-out room was the parents' bedroom which reportedly was devoid of any interesting objects for the child. Each time Denny emitted the undesired behavior, he was placed in the time-out room by the mother for a three-minute period. Mrs. I intermittently praised Denny at times he was not emitting the target behaviors. Time-out was used a total of 12 times on the first behavior and 10 times on the second behavior.
Figures 19-21 represent extra behavioral projects which were carried out by three different parents during the follow-up period.

Figure 19 portrays Mrs. A's behavioral application on her eleven-year-old son, Ralph. As noted in Table 5, the mean number of parental corrections given to Ralph for noisy eating was 4.4 during baseline and 0.2 during the experimental period. There is a clear change in the level of the behavior which remained at zero frequency the last seven days of the experimental period.

Mrs. A utilized praise and a token system. Tokens were poker chips which she administered to Ralph in graded fashion. For no parental corrections during the evening meal, Ralph earned 3 tokens, for one correction, 2 tokens, and for two corrections, 1 token. Ralph could exchange tokens for watching television, obtaining record albums, special food treats, such as pizza, and baseball cards. Mrs. A reported that the behavioral improvement generalized to the other two daily meals.

Figure 20 depicts behavioral applications by Mr. and Mrs. G on their twelve-year-old daughter, Sara. The number of times Sara did not make her bed plus the number of personal items she left strewn about had a mean of 18 during baseline and 1.9 during the experimental period. While causal statements cannot be made due to the A-B design, again there is a clear association between behavioral change and experimental intervention.

Figure 21 represents a record by Mrs. B on the number of minutes taken by her nine-year-old daughter, Tammy, to do the dinner dishes. Mrs. B presented no baseline data, stating that she had previously
FIGURE 19. A Record of the Number of Parental Corrections Given to Ralph for "Noisy" Eating at the Evening Meal During Daily Observation Sessions.
### TABLE 5

A TABLE OF MEAN SCORES, RANGE SCORES AND MEAN SCORE DIFFERENCES DURING BASELINE AND EXPERIMENTAL PERIODS FOR THREE EXTRA BEHAVIORAL PROJECTS

<table>
<thead>
<tr>
<th>Behavioral Description</th>
<th>Number of Figure</th>
<th>Mean Baseline</th>
<th>Mean Experimental Period</th>
<th>Range Baseline</th>
<th>Range Experimental Period</th>
<th>Baseline/Experimental Period</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Parental Corrections</td>
<td>19</td>
<td>4.429</td>
<td>0.222</td>
<td>3</td>
<td>2</td>
<td>4.207</td>
</tr>
<tr>
<td>Bed not Made and No. of Items Strewn About</td>
<td>20</td>
<td>18.000</td>
<td>1.900</td>
<td>21</td>
<td>9</td>
<td>16.100</td>
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<tr>
<td>Number of Minutes to Do Dinner Dishes</td>
<td>21</td>
<td>45.000</td>
<td>26.385</td>
<td>. . .</td>
<td>21</td>
<td>18.615 (estimated)</td>
</tr>
</tbody>
</table>


FIGURE 20. A Record of the Number of Times Sara did not Make Her Bed Plus the Number of Personal Items Left Strewn About Her Bedroom.
FIGURE 21. A Record of the Number of Minutes Taken by Tammy to Do the Dinner Dishes During Daily Observation Sessions.
observed Tammy to take about an average of 45 minutes to complete the dishes. Mrs. B further stated that since she was so sure the experimental manipulations would be effective due to the results she had obtained with Timmy, she was anxious to execute the program immediately. Assuming her reported baseline mean of 45 minutes was accurate, the data do indicate a significant change in the desired direction. Reliability checks, utilizing a neighbor, all yielded 100 per cent agreement.

The experimental manipulation utilized by Mrs. B was praise and a token system. For getting the dishes done within 35 minutes, Tammy earned 3 tokens which she could trade daily for a variety of biological, material and activity consequences.

The results of the student reliability checks are presented in tabular form in Table 6. Because of the small sample involved, no concluding statements can be made. However, in general, it may be stated that the Null Hypothesis (reliability checks would be significantly lower for experimental phases than for baseline) was not affirmed.

**Table 6**

A Table of Per Cent Agreement Between Parent Observer and Student Observer

<table>
<thead>
<tr>
<th>Name</th>
<th>Baseline Per Cent Agreement</th>
<th>Experimental Per Cent Agreement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mrs. B</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>Mr. @ Mrs. E</td>
<td>50</td>
<td>100</td>
</tr>
<tr>
<td>Mr. @ Mrs. I</td>
<td>69</td>
<td>35</td>
</tr>
</tbody>
</table>
Table 7 in Appendix H presents the results of the instructional quiz for individual parents.

Table 8 in Appendix I presents the results for the rating questions of the parent program questionnaire. Also included in Appendix I are the written responses of individual parents to the other four questions of the questionnaire.

Discussion

The major hypothesis of the study asserted that parent participants in the instructional program would experience success in altering two child behaviors. The results demonstrated that five parents (Mrs. A, Mrs. B, Mr. and Mrs. E, Mr. and Mrs. F and Mr. and Mrs. G), utilizing multiple baseline design, clearly demonstrated success in this endeavor. As noted, the data for Mr. and Mrs. I were not clear-cut as the baselines were descending at the time of experimental manipulation. However, as both behaviors in their child reached desired levels, it may be stated that they experienced success from the group instruction. Utilizing an A-B design, Mrs. D may also be considered to have experienced success from the program. However, she did not reach the criterion of altering two child behaviors. While Mrs. C's two child behaviors were altered in the desired direction, the changes were not significant enough to assert from the data that she had reached the criterion. From their data, Mr. and Mrs. H may be considered not to have profited from the instructional program. In all then, it can be stated that six (or 67 per cent) of the total sample of parents successfully reached the criterion of altering two child behaviors.
As indicated in the data (Figures 1-21), all parents used more than one behavioral application. That is, praise was also used in conjunction with another technique, such as time-out or a token system. As such, no statements can be made regarding which experimental manipulations were responsible for altered behaviors. The Experimenter does not view this as a shortcoming in the present research as numerous previous studies have validated the effectiveness of the behavioral applications in question. As previously stated, the major concern of the present study regarded parent effectiveness in changing child behaviors in the home through instruction alone. Based on the foregoing results of the study, it may be concluded that instruction to parents was generally effective for changing child behaviors with the parent as primary change agent.

Even though one parent (Mr. and Mrs. H) failed to demonstrate successful altering of child behaviors and two others (Mrs. D and Mrs. C) experienced only limited success, the Experimenter contends that all parent participants profited from the instructional program. For example, Mr. and Mrs. H, on the parent program questionnaire, rated their skills and confidence as a parent, greatly improved and rated their success in changing two child behaviors as superior. While these self-ratings may be an overestimation on their part, they did see the major problem in their son (stealing behavior) extinguish during the program. Also, Mr. and Mrs. H extended the token system they were using with the target child, Daniel, to their other three children and reported successful application with them.

As noted in the foregoing Implications section, both Patterson
and Walder pointed out that from their experience, not all parents could profit from group instruction. It may be that Mr. and Mrs. H fit this category. Other techniques, such as behavioral modeling in the home, may be needed for the H's to experience success with behavioral applications for Daniel. The Experimenter will continue on an individual basis with the H's in their home.

The extra behavioral projects by three parents during the follow-up period tend to indicate a clear profiting from the instructional program for them. Each project involved a new behavior of a child in the home other than the target child and the programs were carried out solely by the parents with no intervention from the Experimenter.

On a qualitative level (refer to post questionnaire, Appendix I), seven of the nine parents in the sample rated their success in altering two child behaviors as superior or good; the remaining two parents rated themselves average. Regarding question five (how would you rate your ability to change any child behavior in the future?), eight of the nine parents rated themselves superior or good, while the remaining parent rated himself average. Concerning how the parents rated their skills and confidence as parents after taking part in the instructional program (question three), eight rated themselves greatly improved or slightly improved; the remaining parent rated himself about the same. In general then, self ratings from the parents suggest that significant benefits were derived from the instructional program.

Written responses of parents to three items on the post questionnaire also suggested significant beneficial aspects of the instructional program. For example, Mrs. A and Mrs. B implicated increased
communication between parents and children. Mr. and Mrs. E pointed out that they now "know it is possible to change any child behavior". Mr. and Mrs. H stated, "We noticed a great difference. You wouldn't believe!!" Mr. and Mrs. H previously stated that they had taken the target child to a neurologist who prescribed medication; they reported no behavioral changes resultant of daily medication. The teacher who served as second independent observer for Mrs. B told the Experimenter after the program had been in effect two weeks that "Mrs. B was a totally changed woman". In general then, qualitative data suggest that the instructional program was a marked success for the majority of parent participants.

One shortcoming in the present study was the parents' carrying out of independent reliability checks. The Experimenter had specified at least one reliability check per week to be conducted throughout the program. This would have involved a total of eight reliability checks for each parent. Only one parent (Mr. and Mrs. H) met this requirement. Most of the parents falling short of the eight checks offered a variety of explanations, such as the spouse was not at home during the time of observations, there were no relatives, neighbors or friends available during the time of observations, etc. Apparently, the social reinforcers of the Experimenter toward those parents who performed their weekly reliability checks were not enough to motivate the others. From this study, it appears that some type of contrived reinforcer (recall Patterson's use of monetary reinforcers for completed parental tasks and Walder's and Mira's use of contingency contracts specifying parental completion of assignments) are necessary for this particular
parental task. A number of contrived reinforcers could be explored. For example, Cooper (personal communication, 1972) stated that in a recent unpublished study, the experimenter's giving 8¢ postage stamps to those parents who performed reliability checks and ignoring those who did not quickly got all parents in the group performing weekly reliability checks.

In line with the foregoing, other methods of obtaining reliability checks utilizing unbiased observers could be explored. Many of the parents in the present study appeared unwilling to have a student observer in their home. One parent that was asked to have a student come to the home during the second week of the program openly refused. This hesitancy on the part of parents could be for any number of reasons, such as Lindsley's previously noted statement of insulting the parent's ability or a layman's guarded view of "psychological research".

Concerning the foregoing discussion in the Introduction section regarding professional mental health manpower shortages, the present study explicates that the group instructional method was considerably professionally time-saving. In addition to the 11 target children providing data for the study, 18 siblings of target children were influenced. That is to say, the parents learned and applied behavioral techniques which could be utilized in the future on all their children. Of the 29 children of parents involved in the study, 22 were of school-age (6-17 years). Also, as noted, the parents applied all behavioral manipulations themselves. For the Experimenter to have conducted just the twenty change programs of the study on an individual basis obviously would have been significantly more time-consuming than the group
instructional program.

Summary and Conclusions

1. A multiple baseline design procedure demonstrated that five members (56 per cent of the parent sample) experienced success in reaching the criterion of altering two child behaviors. Three members (33 per cent of the parent sample) experienced success in altering child behaviors, but they either did not reach the criterion of two child behaviors, the magnitude of change in child behaviors was small, or the experimental design did not demonstrate any relation between change in behavior and experimental manipulation. One member (11 per cent of the parent sample) did not experience success according to the data.

2. Instruction to parent groups in learning theory and behavioral applications proved generally effective as a method for altering child behaviors in the home with the parent as primary change agent.

3. Three parents (33 per cent of the parent sample) successfully carried out behavioral projects in the home with no outside intervention.

4. Except for one parent regarding one child behavior, all parent reliability checks were at acceptable levels of per cent agreement (.85 or above).

5. The sample of parents involved in parent-student reliability checks was too small to make any conclusive remarks. For one parent, per cent of agreement for baseline and experimental phases was 100 per cent each time; for a second parent, the per cent agreement was
greater during experimental phases than baseline; for a third parent, per cent agreement was less during experimental phases than baseline.

6. Self-ratings by the parents suggested significant benefits were derived from participation in the parent program. A significant majority of the parent sample rated their effectiveness as parents and their ability to change child behaviors in the future as superior or good.

7. Qualitative data (written responses of parents to a post questionnaire) suggested that the majority of parent participants significantly profited from the group instructional program.

8. The group instruction method was professionally economical regarding time involvement. Five weekly, two-hour group meetings influenced the behaviors of 11 target children and 18 of their siblings.
CHAPTER V

SUMMARY AND IMPLICATIONS

Summary of the Dissertation

Behavior modification research to date (1972) has mostly dealt with the individual case. In view of critical shortages in mental health manpower, the author contended that group behavior modification approaches would be more professionally economical than individual approaches. Also, there has been a current emphasis on utilizing the non-professional as much as possible as a further aid to alleviating mental health manpower problems.

The purpose of the present study was to assess parental effectiveness in changing child behaviors in the home with the parent as primary change agent. The method employed was group instruction in learning theory and behavioral applications. The major hypothesis of the study asserted that parents receiving group instruction would be successful in altering two child behaviors in the home. The study involved five weekly meetings of two-hour duration each, a three-week follow-up period and a final meeting after follow up.

The evaluation of results of parent effectiveness was by a multiple baseline design. In a few cases, an A-B design had to be utilized. Parents used another individual of their choice for reliability checks.
and for a few of the parents, graduate students served as second, independent observers.

The subjects of the study comprised two groups of parents, a group of mothers and a group of both parents. All parent participants had responded positively to a solicitation letter from the Experimenter.

In all, nine parents completed the instructional program. The parent participants were all Caucasian, ranged in age from twenty-eight to forty-one years, and were characterized generally as middle class, belonging to small families and having had some college experience.

The general conclusions of the study were as follows:

1. A multiple baseline design procedure indicated that five of the nine parents in the study successfully reached the criterion of altering two child behaviors. A sixth parent, utilizing multiple baseline design, obtained significant levels of change in two child behaviors, but no statements of causality between magnitude of behavioral change and experimental manipulations could be made due to descending baselines at the time of experimental implementation. Two parents utilizing A-B design did not reach criterion as the child behavioral changes for one parent were small and the other parent only obtained a change in one child behavior. A third parent, utilizing A-B design, failed to obtain desired behavioral changes through experimental manipulations.

2. In general, instruction to groups of parents in learning theory and behavioral applications was an effective method for altering child behaviors in the home with the parent as primary change agent.

3. Self-ratings by the parents on a post questionnaire suggested
that all parent participants had derived significant benefit from the instructional program.

4. The group instructional method appeared to be considerably more economical than individual behavior modification approaches regarding professional time involvement.

Implications of the Dissertation

As noted in the foregoing Discussion section, different methods of obtaining reliability checks could be explored in similar future research.

In regard to professional mental health manpower shortages as discussed in the Introduction, the present research has indicated that non-professionals, parents, can successfully carry out behavioral applications after receiving professional instruction.

The parents in the present study were characterized as middle class and generally having above-average education. Effectiveness of the same type of instructional program could be assessed utilizing parent groups possessing various socioeconomic levels and educational backgrounds. In this way, more information could be gained on what types of parents will profit most from an instructional program. Also, as there is an extreme paucity of similar research with father groups, more study could be conducted in that area. As no fathers indicated willingness to participate in the present study in a father only group, pilot research could attempt to assess various ways of obtaining father only instructional groups.

The present research implicates further that variations in the
basic instructional program could be assessed. For example, for parents who were not profiting from the group program, successful parents might assist them on an individual basis in the home.

As suggested by one of the parents in the present study, future research could include the classroom teachers of children having parents in the instructional programs. In this way, child behavioral programs could be carried out simultaneously in the home and school.

Most of the parents in the present study were in the early to mid-thirties. The age variable could be controlled in future studies. For example, would parents in their twenties differ significantly from parents in their forties in effectively altering child behaviors through professional instruction?

Another implication of the present study regarding the age variable concerns the children of parents participating in group instructional programs. Future research might involve those children in similar instructional programs structured to the age level of the child. In this way, the children could become more aware of the alterations in their own behavior and also devise change programs for parental behaviors.

Suggestions for Further Research

1. A similar instructional program could be conducted utilizing parents of different socioeconomic levels and varied educational backgrounds.

2. The variable of varied group composition could be assessed by having large numbers of parents involved in instructional programs
containing mother only groups, father only groups, both parent groups, mother-child groups, and father-child groups.

3. Variations in the basic instructional program could be assessed. One variation might be having successful parents in a group assist less successful parents on an individual basis in the home.

4. Parent instructional groups could include the classroom teachers of the parents' children and effectiveness of altering both home and school behaviors could be assessed.

5. Age of parent group participants could be controlled and differences in parental effectiveness for changing child behaviors could be assessed by age of parent.

6. Instructional groups involving target children could be compared with instructional groups of parents only.
APPENDIX A

LETTER SENT TO PARENTS
Dear (name of parent),

We often do not fully realize the difficulties as well as the joys in being parents until we have our own children—then we are faced with a number of normal child behaviors that often irritate us, such as tantrums, fighting, complaining, arguing, refusing to do household chores, not getting ready on time to go places, etc. We are offered quite a bit of advice from many different sources, such as our own parents, neighbors, ministers, the books and magazines we read, and so on, concerning just what the best way is to rear our children. Many times the advice offered is just the opposite of what we heard yesterday—in view of this and the general fast-moving pace of the times, it is no wonder that the job of being parents sometimes becomes perplexing.

Psychological Services for Madison County Schools are concerned with promoting the welfare of all school children and usually does this by working with the children directly and with classroom teachers.

Psychological Services are now offering a program for parents who wish to learn better and proven techniques for managing and disciplining their children. The parent program will begin with parents having children in the first, second, or third grade of Frey Avenue Elementary School in West Jefferson, Ohio. The program will involve six weekly, two-hour sessions, during which a Madison County staff psychologist will give instruction and guidance in specific techniques for changing child behaviors. You, as the parent, will decide what behaviors in your child you want to see changed and carry out the suggestions of the psychologist yourself.

The parent meetings are scheduled to begin mid-April and will involve small groups of six members each; in addition to mothers of the children, fathers are more than encouraged to participate. Hopefully, we will be able to work with groups of mothers only, fathers only, and both parents.

As the size of the groups will be strictly limited and the parents initially involved will be on a first-come basis, please return the enclosed slip in the self-addressed, stamped envelope at your earliest convenience.

If you check [X] A. Interested, you will soon be contacted by a staff member who will answer any questions you might have and determine a time convenient for you to attend the six meetings.

If you check [X] B. Interested, but not at this time, your name will be kept on file and you may be contacted for future meetings.

If you check [X] C. Not Interested, your name will be dropped.

Very truly yours,

John L. McManus
Dear (name of parent),

Please return this slip in the self-addressed, stamped envelope, whether or not you wish to become involved in the parent program.

Please check one of the following:

☐ A.) Yes, I am interested and would like to participate in the parent program.

Please indicate which parent will participate in the meetings:

☐ Father, ☐ Mother, ☐ Both Parents

☐ B.) Yes, I am interested but will not be able to participate at this time. Please keep my name on file for future reference.

☐ C.) Thanks for offering, but I am not interested in participating in the parent program.

Name of parent: ________________________________

Address: _______________________________________

Phone number: __________________________________

Grade your child is in—first, second, or third: __________
APPENDIX C

PERCENTAGE OF PARENT RESPONSIVENESS TO PARENT PROGRAM LETTER
Letter sent April 1, 1972; number and percentage of returns by April 21, 1972.

Total letters sent: 192

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<th>Category</th>
<th>Number returned</th>
<th>Percentage of Total</th>
</tr>
</thead>
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</tr>
<tr>
<td>Mother</td>
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<td>Both Parent</td>
<td>7</td>
<td>3.6</td>
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<td>B.)</td>
<td>6</td>
<td>3.1</td>
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<td>C.)</td>
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<tr>
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APPENDIX D
IDENTIFYING DATA FOR EACH FAMILY
Name of parent
Father: Mr. A
Mother: Mrs. A

Age of parent
Father: 41
Mother: 36

Length of marriage: 15 years

Highest grade completed in school
Father: 4 years Medical School (20)
Mother: 4 years college (16)

Occupation of parent
Father: Physician PR Score: 82
Mother: Registered Nurse

Estimated SES: Upper class

Size of family: 4

Target child
Name: Sandy
Birthdate: 2-27-65
Age: 7-2
Sex: F

Target child's siblings
Number of brothers: 1
Ages of brothers: 11 years
Number of sisters: 0
Ages of sisters: . . .
Name of parent
Father: Mr. B
Mother: Mrs. B

Age of parent
Father: 33
Mother: 29

Length of marriage: 12 years

Highest grade completed in school
Father: 2 years High School (10)
Mother: 2 years High School (10)

Occupation of parent
Father: Punch press operator PR Score: 29
Mother: Housewife

Estimated SES: Lower middle class

Size of family: 4

Target child
Name: Timmy
Birthdate: 4-11-61
Age: 11-0
Sex: M

Target child's siblings
Number of brothers: 0
Ages of brothers: . .
Number of sisters: 1
Ages of sisters: 9 years
Name of parent
  Father: Mr. C
  Mother: Mrs. C

Age of parent
  Father: 35
  Mother: 34

Length of marriage: 15 years

Highest grade completed in school
  Father: 4 years High School (12)
  Mother: 4 years High School (12)

Occupation of parent
  Father: Fork lift driver  PR Score: 29
  Mother: Bank teller

Estimated SES: Lower middle class

Size of family: 9

Target children
  Name: Donald
  Birthdate: 9-25-64
  Age: 7-7
  Sex: M

  Name: Keith
  Birthdate: 5-4-62
  Age: 10-0
  Sex: M

Target children's siblings
  Number of brothers: 4
  Ages of brothers: 3 years, 8 years, 11 years, 13 years
  Number of sisters: 1
  Ages of sisters: 14 years
Name of parent
  Father: Mr. D
  Mother: Mrs. D

Age of parent
  Father: 36
  Mother: 36

Length of marriage: 15 years

Highest grade completed in school
  Father: 4 years college (16)
  Mother: 4 years college (16)

Occupation of parent
  Father: Time keeping clerk  PR Score: 41
  Mother: Registered Nurse

Estimated SES: Middle class

Size of family: 4

Target child
  Name: Darla
  Birthdate: 5-23-64
  Age: 7-11
  Sex: F

Target child's siblings
  Number of brothers: 0
  Ages of brothers: . .
  Number of sisters: 1
  Ages of sisters: 10 years
Name of parent
   Father: Mr. E
   Mother: Mrs. E

Age of parent
   Father: 29
   Mother: 28

Length of marriage: 8 years

Highest grade completed in school
   Father: 4 years High School (12)
   Mother: 4 years High School (12)

Occupation of parent
   Father: Real estate manager
   Mother: Housewife

Estimated SES: Middle class

Size of family: 5

Target child
   Name: Steve
   Birthdate: 3-14-65
   Age: 7-1
   Sex: M

Target child's siblings
   Number of brothers: 1
   Ages of brothers: 5 years
   Number of sisters: 1
   Ages of sisters: 10 months
Name of parent
   Father: Mr. F
   Mother: Mrs. F

Age of parent
   Father: 35
   Mother: 35

Length of marriage: 15 years

Highest grade completed in school
   Father: 4 years Graduate School (20)
   Mother: 1 year college (13)

Occupation of parent
   Father: College Professor       PR Score: 78
   Mother: Housewife

Estimated SES: Lower upper class

Size of family: 6

Target child
   Name: Becky
   Birthdate: 4-27-65
   Age: 7-0
   Sex: F

Target child's siblings
   Number of brothers: 2
   Ages of brothers: 5 months, 10 years
   Number of sisters: 1
   Ages of sisters: 13 years
Name of parent
   Father: Mr. G
   Mother: Mrs. G

Age of parent
   Father: 37
   Mother: 36

Length of marriage: 14 years

Highest grade completed in school
   Father: 4 years college (16)
   Mother: 2 years college (14)

Occupation of parent
   Father: Pharmacist
   PR Score: 61
   Mother: Housewife

Estimated SES: Middle class

Size of family: 5

Target children
   Name: Peter
   Birthdate: 3-19-65
   Age: 7-1
   Sex: M

   Name: Sally
   Birthdate: 6-24-68
   Age: 3-10
   Sex: F

Target children's siblings
   Number of brothers: 0
   Ages of brothers: ...
   Number of sisters: 1
   Ages of sisters: 12 years
Name of parent
    Father: Mr. H
    Mother: Mrs. H

Age of parent
    Father: 30
    Mother: 32

Length of marriage: 9 years

Highest grade completed in school
    Father: 4 years High School (12)
    Mother: 2 years college (14)

Occupation of parent
    Father: Automobile mechanic PR Score: 37
    Mother: Housewife

Estimated SES: Middle class

Size of family: 6

Target child
    Name: Daniel
    Birthdate: 7-5-63
    Age: 8-10
    Sex: M

Target child's siblings
    Number of brothers: 2
    Ages of brothers: 4 years, 7 years
    Number of sisters: 1
    Ages of sisters: 5 years
Name of parent
   Father: Mr. I
   Mother: Mrs. I

Age of parent
   Father: 35
   Mother: 36

Length of marriage: 16 years

Highest grade completed in school
   Father: 1 year Graduate School (17)
   Mother: 1 year college (13)

Occupation of parent
   Father: Building Contractor    PR Score: 55
   Mother: Housewife

Estimated SES: Middle class

Size of family: 4

Target child
   Name: Denny
   Birthdate: 5-1-63
   Age: 9-0
   Sex: M

Target child's siblings
   Number of brothers: 0
   Ages of brothers: ...
   Number of sisters: 1
   Ages of sisters: 3 years
APPENDIX E

PARENT INSTRUCTIONAL PROGRAM
As I mentioned to each of you individually before, the purpose for this group is for each of you to gain experience in changing the behavior of your children. During this program, you will focus on just a few specific behaviors. Our goal is to effect visible changes in at least two child behaviors by six weeks. During this first meeting, we will consider the two main kinds of behavior, concentrate on further defining the behaviors you wish to see changes in and go over methods of observing, counting, recording and graphing child behaviors.

There are two main kinds of behavior—reflex and operant. Reflex behavior refers to your coming into contact with something which causes a particular reaction in you. This reaction is automatic; that is, you have no control over it. A common example of reflex behavior is a knee jerk when your patellar tendon is tapped. When you peel onions, tears automatically flow from your eyes. When you walk into a darkened room, your pupils dilate or open more. All these behaviors happen automatically and there is nothing you can do to prevent them. You are born with reflex behaviors— they are unlearned.

Operant behavior, on the other hand, refers to the things you choose to do— they involve such behaviors as walking, talking, hitting, reading, etc. You are not born with these behaviors— they are learned. These behaviors are called operant because they operate on the world you live in. Your flicking a light switch on brings light into a darkened room. These behaviors are not automatic like a knee jerk and you can do much to control them. Because there are effective methods for controlling such behaviors, the focus of these meetings will be on the operant behaviors you wish to change in your child. Because
these behaviors are learned, they can be unlearned.

The first important step to take in changing the behavior of your child is to describe accurately the behavior for change. The general rule is— if you can observe (see it, hear it, etc.) and count it, you can change the behavior. Often we describe behavior in very inaccurate terms. For example, we might refer to our child as lazy. But we cannot accurately observe and count laziness because it means many different things to different people— so we would have a difficult time trying to change it. If you say your child is lazy because he lays on the couch for three hours after supper and doesn't do a thing but lay there awake, this is a behavior we can observe, count and change. Another example— my child lacks ambition. How do you observe and count ambition? One thing you could do is look at the number of jobs he starts and completes— how many times a day, how often during the week, etc. My child is unhappy, I want him to be happier. We can only infer happiness, we can't count it. We can count such behaviors as how many times he smiles, laughs, initiates playing games with others, and how many times he tells you he's happy. My child doesn't get along with his sister. How many times does he hit or push his sister, how often does he refuse to share his toys or candies with his sister?

Mother tells her little boy, "Daddy and I will be out tonight and Jane the baby sitter is coming over; I want you to be a good boy". This could only confuse the child— he must often guess at what being good with the baby sitter really means. On the other hand, you could give him a list of specific "good" behaviors— do everything Jane tells you to do; help put your younger sister to bed at 7:00; and, you be to
bed by 8:00. In short, before you can attempt to change a behavior, you must know exactly what it is you want to change— for this, you must be able to count the behavior.

Once you have defined the behavior in countable terms, the next step is to observe, count and record it.

A lot of research has shown that just observing and counting a behavior often by itself changes it. So in order to get an accurate picture of how often the behavior is really occurring, you first do "hidden" recording— this just means not letting the child know you are observing and recording his behavior for one or two weeks until you begin your methods of change. So for that initial period, you keep reacting to your child the same as you always have but you observe and keep a count of the behaviors you have defined at some time during each day. This time for observation and counting will be different for each of you— it will depend on the behaviors you have specified, the time of day and place they usually occur and their frequency. For example, the behavior for change with one parent might be the child's difficulty in getting ready for school in the morning, while for another, it might be frequent fighting behavior at the dinner table. So you must determine the time, place and length of your observational period depending on the specific behavior of your child— the length of this time period may vary from fifteen minutes to an hour or more.

It should be pointed out that the more frequently the behavior occurs, the more opportunity there is to change it. That's why it's often important to break down behavior into its specific parts. For example, if you define fighting as a behavior you want to change, suppose
your child gets into a big fight once every two weeks— that's much too broad for you to go about changing it, so slice fighting down to hitting behavior and let's say that occurs five times per day; you now have 70 more opportunities to teach the child non-fighting behavior. Then you might further break hitting down to swipes and suppose the frequency of swipes is 10 times that of hitting— now 700 more learning opportunities are provided. Conceivably, you could go next to urges, but you would need the child's cooperation here; but if you did, perhaps you could multiply by 10 again and have 7000 more learning opportunities between fights and urges. The main point is that when you increase the precision in defining your behaviors for change, you increase the child's opportunity to learn appropriate behaviors. It would be good if you could pinpoint behaviors for deceleration that occur five or more times a day.

For counting the behavior, you can use instruments such as this golfer's wrist counter or simply tape a strip of masking tape to your wrist and make marks with a pencil or ink pen or make marks in a small note pad or on a piece of paper. For counting the length of behaviors, such as the time the lazy boy spends on the couch doing nothing, you can use a stop watch or regular wrist watch— it is important however, when you are timing the duration of behaviors, to be as accurate as possible.

Recording Behavior.— Keeping a daily record of the behavior forces you to have described the behavior accurately and second, lets you know if your change techniques are being effective— often, you might assume a change has taken place, when in fact, it has not. Your records
of the behavior will leave absolutely no doubt about the effectiveness of your change techniques. The records will also provide a "pat on the back" for you when you visually see the behavior of your child changing.

Recording Methods.— There are many different methods for recording behaviors. A few basic methods will suffice for recording the behaviors of your child in the home. These are called event recording, duration recording and direct measurement of permanent products.

Event recording shows how often a particular behavior occurs. You simply count the number of times a behavior happens during your observational period— this gives you the frequency of the behavior. For example, you could count the number of times your child cries or screams, the number of times he says no or refuses to obey your requests, the number of times he gets out of his chair during dinner, the number of objects he leaves strewn about his bedroom, the number of times he hits you or another child, etc. So just make a mark on the counter you are using each time the behavior you are observing occurs.

Duration recording shows how long a particular behavior lasts. So simply record the duration the behavior was occurring during your observational period. As I mentioned before, its best to use a stopwatch for an accurate measure, but you may also use a regular watch or clock. With duration recording you might be counting such behaviors as the length of time it takes for your child to get ready to go someplace, the length of time that expires before he begins a chore after being requested and the length of time he spends on the chore, the time your child can sit still, the length of time he actively engages in some desired activity— such as doing homework or working on a project, etc.
A third recording method which you may need is called direct measurement of permanent products—this simply involves permanent, tangible behaviors that can be counted; for example, academic behaviors, such as the number of homework arithmetic problems correctly completed by your child, the number of words correctly spelled, etc.

Your record of the behavior will give you what is called a baseline level of the behavior. The baseline level is the rate at which the behavior is presently occurring.

After you record the behavior, to get a clearer idea of its frequency or level, you make a visual picture of the behavior— you do this by putting it on a graph. Your graph will show you the baseline level of the behavior in one of three ways— either ascending (going up in frequency), descending (going down in frequency), or stable (staying about the same). The vertical axis (up and down lines) show the level or frequency of the behavior; the horizontal axis (across lines) show the time, for example days, that the behavior was observed. (Show examples of three behavioral graphs and baselines and give clarification to parents).

Now the question arises how well you have observed a behavior. For example, if there were many on-the-spot witnesses to a bank robbery, chances are the stories given to reporters would differ considerably regarding the details of events that occurred during the robbery. Even though you have precisely defined the behavior you are observing, human error is still possible and you could be somewhat in error in your recordings. To control for this possibility, two observers independently count and record child behaviors. This second observer can be your
EXAMPLE OF DIRECT MEASUREMENT OF PERMANENT PRODUCTS AND A STABLE BASELINE

Baseline Record of the Number of Arithmetic Problems Henry Did Correctly on Ten Consecutive Days.
EXAMPLE OF EVENT RECORDING
AND A DESCENDING BASELINE

Baseline Record of the Number of Times Harry Hit His Brother
During One-Half Hour Observation Sessions.
EXAMPLE OF DURATION RECORDING
AND AN ASCENDING BASELINE

Baseline Record of the Number of Minutes Frank Played Cooperatively
With His Brother During One-Half Hour Observation Sessions.
spouse, an older child, a relative, or even a friend. It is important that you both go by the same definition of the behavior you are recording. The behavior should have been so defined that someone else could count it and get the same count of the behavior that you get. You will use this second observer at least one time per week during the program and for the three weeks following the formal end of the program. In addition, an outside observer will observe and record child behaviors in a few of your homes once or twice during the program. This observer will be a student from Ohio State University. If there should be considerable disagreement between any two observers, this would mean we will have to define more precisely the behavior in question.

Now you know that when you have a guest coming to your home, your child often behaves quite differently while the guest is there. It is desirable that your child's behavior be about the same as it would normally be without any outsiders present. Therefore, there should be absolutely no interaction with the outside observer; if your child attempts an interaction, the observer's instructions are simply to ignore the child. To aid a nonobtrusive presence of the observer, some functional role will be attached to him— for example, a measurer of some common household object, such as carpeting or drapery; he will then simply record the child behaviors under study the same as you.

Beginning tomorrow then, you will start observing and recording two child behaviors you have defined for changing and graphing each behavior on a separate sheet of graph paper. As I mentioned before, for the next week or two, this is all you do— observe, count, record, and graph these two behaviors to establish a baseline. Remember, for this
period, do not let the child know you are specifically observing and recording his behaviors. Then, in one to two weeks you will begin your change techniques to alter the frequency of these two behaviors. As a general rule, before beginning your change techniques, the behavior should be about the same frequency for each observation period (a stable baseline), or it could be an ascending baseline if you want to decrease the behavior, or a descending baseline if you want to increase the behavior. Only one behavior will be worked with at a time and when its rate changes in the desired direction (hopefully in a week or two), you will continue your change technique with that behavior and begin changing the second behavior. The change program is organized that way to demonstrate in a very obvious way that the child behaviors are changing because of what you are doing. Also, it is much easier for you to concentrate on one behavior at a time. Research has shown that when you change just one or two behaviors in your child by the techniques I will explain next week, the effects may change many more behaviors—in a sense, you may suddenly have a new child and a whole new relationship with him.

(Assist and have the group work together on precisely defining two child behaviors for change for each group member).

What Influences Behavior.— As parents, we often look in the wrong direction for the causes of behavior. For example, if our child throws a "temper tantrum", we tend to ask ourselves what happened before to cause the tantrum— is it something I or somebody else said to upset the child?, has the child had a bad day and finally reached his breaking point?, and so on. Rather than looking at the before aspects
of the tantrum however, we should look at what happens immediately after
the tantrum. Extensive psychological evidence now tells us that behav-
or is influenced by its consequences— those things that happen after
the behavior. Most of your behavior is brought about and maintained by
many different consequences— in other words, you learn your behavior
according to the consequences that the behavior receives. For some sim-
ple examples— you flick on a light switch because the consequence of
this behavior (light brought into a darkened room) has paid off in the
past, so you continue to do it. If the light switch failed to provide
the consequence of light, you would soon discontinue flicking the
switch. What is your favorite color? You may have received compliments
(good consequences) on days you were wearing blue more frequently than
when you were wearing other colors. What is the favorite meal you pre-
pare? You may have received praise and compliments for that particular
meal much more than for others. In short, considering why you behave
as you do— the natural world around you is just full of consequences
that influence your behavior.

There are basically three possible effects of consequences.

(1) Some consequences will increase a behavior. For example, if
you provide the consequence of giving Henry a piece of candy immediately
after he takes out the trash, it is more likely that he will take
out the trash more willingly in the future. If you praise your chil-
dren when they are playing together peacefully, it is more likely they
will do so in the future. These consequences that increase a behavior
are called positive consequences or reinforcers.

(2) Some consequences decrease a behavior. For example, if the
consequence of a child's putting his hand on the stove is to get burned, it is less likely that he will put his hand on the stove in the future. Such consequences that decrease a behavior are called negative or punishing consequences. Also, the absence of positive consequences can decrease a behavior. For example, if a slot machine never pays off, that consequence decreases your behavior of pulling the handle— you move on to another machine.

(3) Some consequences have no effect on behavior; this is to say that many things often happen after a behavior and not all of them influence the behavior. These consequences that have no effect on a behavior are called neutral consequences. An important point is that neutral consequences can become valuable influencers of behavior— they can become positive consequences through a technique called pairing which will be discussed later.

The important thing to remember is that behavior is influenced by its consequences and that while nature provides numerous consequences which teach a child his behaviors, parents can improve on nature by deliberately, systematically and consistently managing consequences in order to influence the behavior of children.

The specific techniques we will consider have to do with arranging consequences for child behaviors you wish to change. The overall method for changing child behaviors is to (1) define the behavior in countable terms, (2) count the frequency of the behavior, record it and graph it, (3) arrange a consequence to change the behavior (the consequence must be immediate and consistent to change the behavior), and (4) keep counting and graphing the frequency of the behavior so
you will know if the behavior is changing. Again, I emphasize that you cannot rely on memory or casual impressions. If the consequence you arrange doesn't change the behavior, you try and try again—usually, with a maximum of your using three consequences, success in changing the behavior of your child is 100 per cent guaranteed.

Kinds of Consequences that Influence Behavior.-- Consequences may be classified twofold as either being unlearned or learned.

Unlearned consequences can be thought of as those consequences that satisfy biological needs—in other words, we are born with a survival need for these consequences, we do not have to learn them; because we are born with a need for them, arranged properly, they can be strong influencers of child behaviors. Examples of these unlearned consequences are the basic satisfiers of survival needs, such as food, water, protection from extremes of heat and cold and the avoidance of intense pain. For example, foods, such as candies, can be a powerful influencer of behavior, especially for that of young children. These unlearned consequences are common to all of us as human beings.

Learned consequences do not satisfy any biological needs—we do not need love, recognition or power to survive; the value of these consequences is learned and as such, the value is not common to all of us—each of us is a unique human being and we have learned to place a different value on various learned consequences. Examples of learned consequences that influence behavior are such things as money, green stamps, and praise, recognition and attention.

The positive consequences which can be used to change a behavior can be considered as either social or non-social.
Social consequences involve a person's behavior. For example, in regard to your child, social consequences would involve your tone of voice, words of praise, giving attention, approval, pats on the back, smiling, touching, being near, etc. Research has shown that one of the most powerful consequences for a child's behavior is the love, interest, and attention of his parents—seriously listening to him, talking with him, smiling at him, hugging—all these on your part can significantly determine the child's behavior. If a child's mother praises him each time he puts away his toys, it is more likely that he will put away his toys in the future.

Non-social positive consequences can be classified as biological, material, activity or token consequences. Positive biological consequences would be any foods the child likes. Material consequences would be things or objects that have attained value for the child.

The child's own behavior as a positive consequence refers to his engaging in a preferred activity after he has completed a less preferred activity; activities a child likes to do can be used to strengthen behaviors he doesn't care too much for—you arrange for the child to do something he really desires to do after he completes something he does not desire too much. Common examples are such parental statements as—"you may watch television when you have completed your homework"; "you may go out and play with your friends when your room is cleaned"; "you may have dessert when you have finished your potatoes"; etc.

Tokens are originally neutral consequences but they become positive consequences due to their exchange value and close association with positive consequences. The most obvious example of a token in our
society is money—we work for the green piece of paper because it can be exchanged for things we need and desire to have. The housewife's green stamps are another example—by themselves, they are without value, but they become valuable because they can be exchanged for desired objects. Tokens for children can be any number of common objects such as brass rings, toothpicks, pennies, paper clips, poker chips—when using tokens to change behaviors, it's best to pick a concrete token that the child cannot get anywhere but from you.

Negative or punishing consequences decrease a behavior. There are two aspects of punishing consequences—(1) inflicting pain or (2) using a time-out from positive consequences.

You are all quite familiar with the first aspect of punishing consequences. Inflicting pain (in such forms as spankings, threats of punishment or the loss of privileges, confining a child to his room for the entire evening) is the most common parental method for attempting to change child behaviors. The reason for this is that punishment is easy and simple to administer, it does temporarily stop the behavior of the child, it also tends to relieve the anger and frustration of the parent and punishment is resorted to by parents because it was used on them and they never really learned any other kinds of effective child management techniques.

From a scientific point of view however, this first aspect of punishing consequences is usually unnecessary for child rearing. This is so because punishment has undesirable side effects and there are more effective positive methods of child management.

Undesirable Side Effects of Punishment.---The most obvious
undesirable side effect of punishment is the emotional reactions it causes in the child—these are expressed as hate and anger toward the punishing person, the parent. Sometimes the child's anger is expressed rather directly by physically assaulting the parent or breaking and throwing objects at the parent; more commonly the children express their anger at punishing parents in more subtle ways such as continuously doing little things to irritate the parent, being sarcastic, frequently arguing, purposely being late when the parents are in a hurry to go someplace, etc.

Another typical side effect of punishment is avoidance or escape behavior— the children avoid and stay away from those who punish them. In addition to physically avoiding you, the kids also psychologically escape from you— they tune you out, they no longer hear or listen to anything you say.

Also, punishment provides an aggressive model for the children's behavior; children learn to imitate the behavior of their parents.

Further, human beings are remarkable in adapting to levels of punishment. Parents find that for punishment to stay effective in temporarily stopping a child's behavior, it must be increased in intensity each time; since punishment only works for a little while, this increase in intensity will be necessary—so eventually, for punishment to work, it would have to be backed up by the threat of total annihilation. We see this in operation in our system of criminal justice; each offense is punished more severely, until eventually, life imprisonment or the death penalty awaits the offender.

Last, punishment used alone does not teach the child any alternate
acceptable behaviors.

This first aspect of punishment, the administration of pain in some form, is then, mostly an ineffective method for teaching desirable behaviors to your child. There are some occasions however, when the temporary use of punishment should be employed. When a problem behavior occurs so often that there is little or no good behavior to provide positive consequences for, you have little choice but to use punishment; for example-- a child who hits and kicks other people continuously. When the intensity of a problem behavior is so great that there exists a danger to the safety of the child or to others; for example-- a child's continuously scratching himself to the point of bleeding, a child's temper tantrums so intense that he severely bangs his head against a wall, a child's playing with knives and threatening to stab other children, a small child's frequently running into the street. Or, the use of punishment might be considered when the parent's positive consequences are not effective because there are more powerful other consequences maintaining the problem behavior; for example-- a young child may not come straight home from school at the parents' request because he gets lots of positive consequences from other children away from the home. A punishment the parents might use in such a case is that the child loses five minutes of television that night for every minute he is late.

The other aspect of punishment-- time-out or the removal of the child from positive consequences for a short period of time-- avoids the undesirable side effects of punishment and does allow the child to learn acceptable behaviors. More about that later when we consider
specific techniques for managing child behaviors.

Ineffective Uses of Consequences to Teach Child Behaviors.--
First let us consider examples of ineffective uses of consequences in teaching child behaviors.

Infants are not necessarily born with crying behavior-- it is too often taught. For example, mother is concerned about her infant's being in pain and it is difficult always to tell what is wrong when the infant is crying. After a short time, mother learns that just picking up the baby is enough to quiet him-- this then reinforces the mother for picking up the baby because the irritating crying stops; it also reinforces the baby for crying-- in effect, he learns that to get mother's attention, affection, nearness, etc.-- all I have to do is cry. The main point is-- parents and children (beginning with their infancy) teach each other how to behave; in this example, the baby trains the mother to pick him up by crying because each time she does so the crying stops and the mother trains the baby to cry by providing him with valuable social consequences each time he does cry. My sister has four energetic boys; she once remarked that each succeeding child cried less when an infant. The reason for this is that with the first child, she had much time to attend to him and inadvertently taught him crying behavior by reinforcing it when it occurred. As the family grew however, she had less and less time to attend to the crying behavior of new infants-- in this way their initial crying behavior was ignored, not reinforced-- the later children were not taught to cry.

Another example-- with several youngsters in the house, the noise level often becomes unbearable for the parents. Suppose the noise level
from two boys playing in the living room has reached the intolerable level and the mother screams from the kitchen— "stop fighting in there or you will both get a spanking". Usually, the boys will quiet down for a short time if mother has backed up her threats in the past; because the noise is temporarily reduced, the mother gets reinforced for her yelling behavior. The boys are actually training the mother to do a lot of yelling and threatening and the mother is training the boys to be noisy by providing attention for noisy behavior. Remember— it is the consequences of behavior that influence behavior.

I referred before to the powerful influence of parental attention on child behaviors. Because of this, parents often inadvertently bring about the very behaviors in their child they do not want. That is, all too often, good behaviors in the child are taken for granted and most of the parental attention is focused on undesired child behaviors. In this way, parental attention actually supports the inappropriate behavior— the kids simply keep doing many irritable things because of the attention it brings them. This is so even when punishment is used. For example, every time you punish a child with spankings, verbal threats, reprimands, etc., at the same time you are rewarding the specific punished behavior with attention— for many children, this reward of attention is much more important than the punishment accompanying it.

Effective Uses of Consequences to Teach Child Behaviors.— Now let us specifically consider effective uses of consequences to teach desired child behaviors. We can consider this in two ways: (1) using consequences to increase desirable behaviors, and (2) using consequences
to decrease undesirable behaviors.

Techniques for Increasing Desirable Behaviors.— The general rule is: to increase a desired behavior, follow it with a positive consequence. The consequence lists give examples of the five different types of positive consequences we have considered briefly—social, biological, material, activity, and token.

In using social consequences to increase a behavior, for example praise, it's important to describe the behavior you are praising in the child, not the whole child; for example, "I'm very pleased that you got dressed so fast" would be more effective for increasing fast-dressing behavior in your child than your saying, "you're a good boy". Also, be careful not to follow your positive social comments with negative critical statements or the positive will lose its intended effects.

Analogous to using praise for desired child behaviors is a technique called "ear-shotting". For this to be effective, you pick out one part of a behavior and remark positively about it to someone else—within ear-shot of the child. For example, suppose the child is extremely slow in getting ready to go someplace. The father might remark to the mother, "did you see how fast Timmy put on his left-hand sock?"—which you observed to be true; "that certainly is a sign of a fast dresser, a fast getting reader, etc.". In this way, by just focusing on one small part of a behavior which does occur, you can establish a new role in your child; in the example given, by ear shotting just a few times, you would suddenly have a fast-getting-ready child. In short, don't hesitate to brag about the good aspects of your child's behavior in the presence of others.
You can use then, any of the consequences given in the lists, and many others you can think of, to increase the desired behavior on which you are working.

In using positive consequences, there are two key concepts that need to be stressed—these are immediacy and consistency. While positive consequences for adults can often be delayed (such as getting the paycheck at the end of the week or month) and still be effective, this usually is not the case with children. Positive consequences for increasing a child's behavior should immediately follow that behavior each time it occurs. This is especially important for younger children—what's going to happen later in the day, next week or next month is of no concern to them; their world revolves around the present.

Now in further considering consistency (providing a positive consequence each time the desired behavior occurs), if you had to keep rewarding a desired behavior every time it occurred in order to keep it going, this would be a very impractical approach to child rearing and an almost impossible parental task. Fortunately, this is not at all necessary. Most of our behavior is maintained by receiving valued consequences only every once in awhile or intermittently. We see this very clearly in the behavior of the gambler; it is because of intermittent pay-offs that he continues "playing the game". However, when we consider behavior for change in children, it is usually because the desired behavior is presently at a very low level. Therefore, to get the behavior going, so to speak, we provide a positive consequence for it each time it occurs. Once the behavior reaches and for a short time stays at a desired level, then we switch to reinforcing it every so
often. For example, if praise is the technique you are using to increase the frequency of a child's playing cooperatively with his brother, you would praise him each time you caught him displaying the appropriate behavior. Then when cooperative play had increased to the desired level and stayed there for a few days, you would praise him perhaps every second time the behavior occurred, then every fourth time, seventh time, twelfth time, etc. Intermittent praise for this behavior then, praising every so often, would maintain it at the desired level. Another example—if your goal is teaching your child to mind you (to comply with your requests), you would praise him each time he minded you at first; then once he began to mind you fairly well, you would praise him every third time, every fifth time, etc. The main point is then—your providing of positive consequences in teaching your child new behaviors is used differently early and later in your training program; remember—to get the behavior going, provide a positive consequence for it every time it occurs and to keep it going, provide the positive consequence intermittently or every so often.

Now it would be very desirable and parenting would be the easiest job in the world if social consequences alone could teach your child acceptable, mature behaviors—usually, this is not the case; praise by itself is often not sufficient for teaching child behaviors. There are, however, effective techniques for increasing the value of social consequences, or for that matter, of any consequences.

A major technique for increasing the value of consequences is called pairing—that is, if initially weak consequences are paired with already strong consequences, the weak ones gain in strength so
that eventually they can be used alone to influence child behaviors. For example, if a parent finds that praise alone does not significantly alter a child's behavior, material or biological consequences, such as money or a piece of candy, would be given to the child following a desired behavior immediately after the praise was given. Once this combination became effective in maintaining the behavior, the material or biological consequences could be tapered off and soon discontinued altogether as the praise alone would have sufficiently gained in strength—that is, the praise, because it was paired with already strong positive consequences of money or candy has itself become a strong positive consequence for the child's behavior. In general then, when teaching a child a new behavior, it is often a good idea to pair social consequences with biological or strong material consequences.

To clarify this process a bit further, it is by way of pairing biological consequences with social consequences that an infant learns to be responsive to the "love" of his mother—each time the mother provides biological consequences (food) through nursing and feeding the baby, she is at the same time providing many social consequences (smiles, nearness, caresses, touching, holding, etc.)—because these social consequences are associated closely in time with the naturally satisfying biological consequences of food, the social consequences gain in strength and become just as sought after by the child as food itself. So even though young children tend to be more responsive to such things as candy, foods, toys and money, the attention or praise of the parent can be made to have just as much or more value to the child through pairing.

A second way that the value of consequences could be increased is
having the child deprived for a short time of the consequences in question. For example, waiting until a child has used up all his money or candy can make money or candy much more valuable as consequences. If you were providing the material consequence of 35¢ a day for the child’s successful completion of a homework assignment, that consequence would be meaningless if grandmother had just recently given the child $1000 for his birthday. So in general, desired consequences that the child has had little of would be most effective. Obviously then, the value of different consequences is going to be different for different children.

This leads to the third technique for increasing the value of consequences. If each of you tells me he loves steak and I provide a steady diet of steak to you every day, soon you will lose your initially strong desire for steak and want something else for dinner. The same process applies to many consequences---a steady diet of them may lead to satiation. You control for this effect by changing the consequences frequently---that way, you will always be providing something of present value to the child in return for his desired behavior. Of course, some consequences, such as money, you might never have to change as the value of money usually remains persistently high throughout our society.

Now a word on using token consequences.... As I mentioned before, tokens are originally neutral consequences having no value in themselves but they attain considerable value through pairing---that is, through their association with already positive consequences. Using tokens to teach child behaviors is done in the same fashion as the housewife uses
her green stamps. The parent simply makes a list of desired items for
the child and indicates how many tokens are needed to "purchase" a par-
ticular item. The items can be any number of biological, material, or
activity consequences. It is usually best to pick a concrete token that
the child cannot get anywhere but from you. Also, the child should al-
ways be included in your making up of the list

Example of Token System

<table>
<thead>
<tr>
<th>Item</th>
<th>Number of Tokens (Points)</th>
</tr>
</thead>
<tbody>
<tr>
<td>model airplane</td>
<td>5</td>
</tr>
<tr>
<td>kite</td>
<td>5</td>
</tr>
<tr>
<td>baseball</td>
<td>5</td>
</tr>
<tr>
<td>penny</td>
<td>5</td>
</tr>
<tr>
<td>new shirt</td>
<td>5</td>
</tr>
<tr>
<td>Hot Wheels</td>
<td>5</td>
</tr>
<tr>
<td>new bicycle</td>
<td>50</td>
</tr>
<tr>
<td>choosing dessert</td>
<td>5</td>
</tr>
<tr>
<td>choosing camping site</td>
<td>10</td>
</tr>
<tr>
<td>having friend stay overnight</td>
<td>10</td>
</tr>
<tr>
<td>not having any chores for a week</td>
<td>15</td>
</tr>
<tr>
<td>choice of one package or envelope from &quot;Surprise Box&quot;</td>
<td>15</td>
</tr>
</tbody>
</table>

In using any of these methods of providing positive consequences
for strengthening a desired child behavior, an important point to keep
in mind is not to expect too much of the child all at once. In other
words, usually we employ the technique of shaping the behavior toward
the final goal. For example, suppose your behavioral goal is to have
the child be able to sit still for at least an hour because he will
have to do so in many situations— in church, school, travelling in
the car on a trip, at a dinner party, etc. You have specifically de-
fixed the behavior as sitting still in one place and you have indicated
your behavioral goal—sitting still for a one-hour period of time. Next, you do duration recording to get the baseline level of the behavior. Suppose you time the child's sitting-still behavior each night during the dinner hour and find, after a week or so of recording, that the longest period he ever sat still was 10 seconds—you have a very fidgety child. For your change program, you break the behavior down into many small steps or mini-goals. Your first mini-goal might be sitting still for 7 seconds; as soon as the child achieved this first step successfully, you would immediately provide the positive consequence you are using, such as praise and a coupon (which could be traded for desired items). With each success of the child then, you gradually would increase his requirements (time periods of sitting still); that is, you would shape longer and longer periods of sitting-still behavior until finally the child was able to sit still for a whole hour. If the behavior were extremely difficult to get going in the first place, you could use prompting—either physical (physically hold the child still for three seconds and then reward him) or verbal ("please sit still for three seconds and you will earn a coupon"). In short, do not expect too much of the child too soon—work toward your final goal.

Using positive consequences to alter child behaviors helps you to focus on the acceptable behaviors you want to see in your child. Often however, parents have been so used to catching the child being bad that the transition to a more positive approach is not always easy. To assist you in this process, don't hesitate to make your own signs and reminders—make a simple sign such as "praise" or more specifically, "praise Tommy each time he cleans his room" and hang the sign where you
will see it often daily. Another reminder aid is to have another family member count the number of times you use positive consequences in attempting to change a particular child behavior. Such a record could have dramatic effects in changing your behavior.

**Techniques for Decreasing Undesirable Behaviors.**—Next let us consider techniques for decreasing undesirable behaviors. First, any undesirable behavior is being maintained by some consequence. For younger children, the consequences for undesired behaviors are usually confined to the home and are given by other persons in the home. For example, what is the consequence that could be maintaining one child's frequent teasing of brothers and sisters? All we have to do is look at what happens immediately after he teases another child. Does he get a lot of reactions from others? Does he get a lot of attention from his parents each time he teases? It could be that parental attention is a strong consequence for maintaining the child's teasing behavior. Thus, one way of reducing that undesired behavior in the child would be to no longer provide the customary consequence. That is, instead of giving attention to the behavior, the parent simply totally ignores it, as though it did not happen at all. This technique is called extinction because by withdrawing the customary consequence, the behavior will soon extinguish. When using this technique, the behavior usually gets worse before it gets better—there tends to be a temporary acceleration of the behavior in the child's attempts to get the customary consequence. For example, if the parent starts ignoring a child's tantrum behavior, the frequency of tantrums might increase two or three-fold above the baseline level until it begins to decrease and stop.
When using extinction to decrease an undesired behavior, it's best to teach the child an acceptable alternative behavior which is incompatible with the undesired behavior at the same time. In other words, the best way to eliminate an undesired behavior permanently is to replace it with another behavior which is incompatible with the undesired behavior— incompatible simply means the undesired and desired behavior are about the opposite of each other, they cannot both be part of the child's behavior at the same time. For example, the incompatible or opposite behavior of stealing is non-stealing or honest behavior. To use extinction, you would ignore all stealing behavior and provide strong positive consequences for all non-stealing behavior. These two behaviors would of course have to be carefully defined to the child. Incompatible with fighting between children is cooperation between children. Thus, for the extinction technique, you would ignore fighting and provide positive consequences for cooperative behaviors.

A second technique for decreasing unacceptable behaviors is called time-out from positive consequences. Parents know this technique as physical isolation— such as confining a child to his room. Usually, however, such confinement is better classified as punishment since the time period is too long and the undesirable side effects of punishment may occur. Time-out, on the other hand, is a brief period of isolation (e.g., a five-minute limit) and it should be coupled with positive consequences for an acceptable incompatible alternative behavior to be effective. So following the brief period of isolation, the child is able to earn something positive. You could consider this technique similar to a penalty box in hockey— the player is separated from the positive
consequences of playing the game for a few minutes because he has broken a rule; but after his few minutes of isolation, he may return to the game and earn the privilege of staying there by not breaking any more rules. Concerning the place for time-out or isolation, sending a child to his bedroom which contains many games and playthings would be an inappropriate use of this technique, since the object is to separate the child temporarily from all positive consequences. Therefore, the place for time-out should be quiet, isolated, and very dull—ideally, a bare room with only a light and chair would be best. However, an uninteresting room such as a bathroom would suffice. The parent should use this technique in a calm, matter-of-fact way and provide clear-cut steps to the child for earning back positive consequences for acceptable behavior. For example, if you were using the time-out procedure for tantrum behavior, you would specify to the child that each time he had a tantrum, he would have to go to the time-out room for five minutes and remain quiet while in there—if he were not quiet, you could have him stay another few minutes. When the time limit is up, remove the child and provide positive consequences for acceptable behaviors incompatible with tantrums as soon as possible.

A third technique for decreasing behaviors is punishment, which I have already considered at some length. If you choose to use punishment, you should use it sparingly and be sure to place the focus on training acceptable alternative behaviors in your child. My own bias is to employ punishment only when the behavior in question is of a very serious nature or a dedicated application of positive techniques has, for some reason, been totally ineffective in changing the behavior.
A final point I want to make in considering parental change techniques is always to include the child and other family members in exactly what you are doing. If you are using extinction for an unacceptable behavior, it's best if all family members learn to ignore that behavior in the child. As for including the child himself in your change program, the long-range goal is for the child to guide his own life, to make mature decisions, and so on. Using the techniques I have described is a first step in that direction. Also, when you let the child see his daily record of behavior, he can take as much pride in seeing his behavior change on the graph as you will; many children become so enthusiastic with the recording process, that they begin to count and record their own behaviors.

When specifying the desired behaviors for your child, learn to be as precise as you were in defining the behaviors for change. For example, telling the child to clean his room is vague and imprecise—better to say, "you must clean your room by Saturday before going out to play; by clean, I mean pick up all your toys from the floor and put them neatly in the closet, put all your dirty clothes in the hamper and all your clean clothes on hangers or in drawers, make the bed how I showed you, vacuum the floor, and dust the shelves and window ledges". You could put these directives in the form of a check list for the child. For example, in teaching a young child to do dishes, your check list might be as follows:

(1) fill the sink with hot water

(2) put in one capful of detergent

(3) wash the large dishes, then the glasses and cups, then the
silverware, then the pots and pans

(4) dry all the dishes and put them in their proper place

(5) wash the counter

(6) clean the sink

(7) put away the detergent, towels and dishpan

Such precision in defining tasks for children aids the learning process considerably and makes growing up a pleasurable experience.

Possible Resistences to the Approach Advocated.— In considering the details of the approach I have advocated, several legitimate queries often come to mind.

A first perplexity concerns the mistaken belief that children are supposed to behave appropriately, as if by nature. The essential question however, does not involve the innate goodness or badness of a child, but rather how he has learned his behaviors— if some of the child's behaviors are inappropriate, it simply calls for parental retraining of the child. The methods I have advocated appear to do that retraining best.

A second question might be stated— but the outside world is not the way you have advocated; if we start systematically providing positive consequences for the child's acceptable behaviors now, what is going to happen when he leaves home?— the world at large is not going to systematically provide such consequences. In answer to this question, an anthropologist would label our American type of child rearing as extremely discontinuous; that is, parents actually teach their children to be dependent, to take orders, and so on, until they are about twenty-one; then, the parent says, "you are twenty-one now, son— time for you to make your own decisions". For twenty-one years, the parent gives
the child the things that the child wants without any real effort or earning on his part. Is it really any surprise then that many children find it quite difficult to adjust easily when suddenly they must "shift for themselves"? The techniques I have presented advocate preparing a child for the real world at the earliest possible age; with this approach, children learn early that desired consequences are theirs for the taking if they are willing to work for them— and, with an effective parental use of this approach, children gradually assume more and more responsibility for their own behavior.

A next question is— but aren't we still bribing a child to do what is expected of him? First, a parent should not expect anything of a child— to do so is ignoring a major parental responsibility; a parent should train and teach the child appropriate behaviors. Second, bribery with adults refers to paying a person for performing an illegal or immoral act— certainly, this does not apply to the approach I have suggested. With children however, bribery refers to a situation in which the child will not do something and the parent says, "allright, I'll give you a dime if you do the dishes". This way, the child is actually being rewarded for not doing what he was supposed to do in the first place— the parent has offered a positive consequence "after the fact", so to speak. This way, it is indeed a bribe and a very poor method of child rearing. With the approach I have advocated, the conditions are always set up beforehand— the child is given a positive consequence only if earned and not given the positive consequence if it is not earned. In short, children deserve much more from parents than bribes to behave appropriately— they deserve a real concentrated
effort of systematic training by the parents.

A next issue is favoritism. When focusing on changing a behavior in one child by providing positive consequences, don't the other kids feel left out? shouldn't all the children be treated equally? First, in regard to equal treatment, few parents ever object to individualizing punishment, so there really should be no great concern over individualizing positive consequences. Second, if favoritism did become an issue with the other children in the family, it can be resolved easily by using a "sharing of earnings"; that is, when the child you are working with meets his acceptable level of behavior, all the children could share in some of his positive consequences. This is a valued change technique in itself because with sharing involved, the other children begin encouraging the appropriate desired behavior in the child with whom you are working.

A last consideration involves the element of time— many parents might legitimately say, "I simply do not have the time to devote every day to the methods you advocate". The answer to that statement is the simplest of all— you already do devote a considerable portion of your time to child-rearing concerns and if you do not take the required little bit of extra time initially in effectively training your child for acceptable behaviors, you will spend considerably more time in the long run attempting to handle inappropriate behaviors through arguing, fighting, and worrying. On the other hand, when you teach your child systematic rules about the consequences for his behavior while he's young, he will be more independent and mature in his later youth— many of the typical, and perhaps more profound, parental difficulties associated
with the child's adolescent and later years will have been avoided because of your early efforts now. In short, spend just a little more time in putting the methods I have advocated to use and you will save a lot of time in the long run.
APPENDIX F

OUTLINES FOR PARENTS OF IMPORTANT POINTS AND DIRECTIVES
GUIDELINES FOR PARENT GROUPS
(Meeting 1)

I. The major purpose of the parent group meetings is to explore ways of assisting children in their development toward maturity; the method employed is instruction in behavioral technology by the group leader and practical application by the parents involved.

II. Responsibilities of the group leader:
1. to provide relevant instruction in behavioral technology
2. to assist the parents in deriving their own specific goals to be accomplished during the program; these parent goals should involve practical application in altering at least two child behaviors—this practical application on your part is one of the most important aspects of the program as learning by doing is always more meaningful
3. to keep the group on the topic at hand when necessary during the group meetings
4. to be available for phone consultation, if necessary, during the program

III. Responsibilities of the parents:
1. to assume that the group leader and other parents involved desire what is best for your child
2. to make an earnest effort in practical application of the instructional principles; too often we assume that the way things are is the way they have to be—psychological research tells us that most behavior is learned and that unlearning and relearning are usually possible
3. to feel a responsibility for helping every other group member by providing ideas and information whenever possible
4. to maintain confidentiality of the personal affairs of parents discussed in the group and not to discuss the affairs of parents who are not members of the group
5. to attend every weekly session as the group leader has structured the program in a step-by-step fashion—the overall goal is that you have acquired useful knowledge and can apply that knowledge effectively by the end of the six-week period
OUTLINE OF PARENT INSTRUCTIONAL PROGRAM
(Meeting 1)

I. Two major kinds of behavior
   1. reflex behavior— unlearned, automatic reactions
   2. operant behavior— learned behaviors

II. Describing, defining, observing, counting, recording, and graphing behaviors— points to remember:
   1. define behavior for change in countable terms— that way, you will know when the behavior is changing
   2. at first, do "hidden" counting and recording of the behavior to get an accurate record
   3. the more frequently the behavior occurs, the more opportunity you have to change it
   4. for accurately counting behaviors, you can use instruments such as a golfer's wrist counter or a stopwatch or simply mark masking tape on your wrist or a notepad with a pen or pencil
   5. recording methods
      a.) event recording— how often; count number of times the behavior occurs
      b.) duration recording— how long; count length of time the behavior occurs
      c.) direct measurement of permanent products— how many; count number of permanent products
   6. graphing the behavior— getting a visual picture of the frequency of the behavior
   7. baseline level of the behavior— rate at which the behavior is presently occurring
   8. how well have you observed the behavior— use an independent second observer (spouse, older child, neighbor, friend, etc.) at least once per week

III. Group members assist each other in setting specific goals for program— that is, what few changes would each of you like to see in your child? You do not have to concentrate on severe "problem" behaviors— primarily, this is to be a learning exercise for you in practical application of behavioral principles.

IV. Begin observing and recording two child behaviors you have defined for change and graphing each behavior on two separate sheets of graph paper— one for you to keep, one for the group leader.
OUTLINE OF PARENT INSTRUCTIONAL PROGRAM
(Meeting 2)

I. What influences behavior
1. usually we ask what happened before the behavior
2. most behavior, however, is brought about and maintained by its consequences— that is, what happens immediately after the behavior

II. Consequences have three possible effects on behavior
1. Positive consequences— increase a behavior
2. Negative (Punishing) consequences— decrease a behavior
3. Neutral consequences— have no effect on behavior

III. Method for using consequences to change child behaviors
1. define the behavior in precise, countable terms
2. count the frequency of the behavior, record it and graph it to establish a baseline
3. arrange a consequence to change the behavior (the consequence must be immediate and consistent to change the behavior
4. keep counting and graphing the behavior so you will know if the behavior is changing
5. if the behavior is not changing, try a different consequence

IV. Kinds of consequences that influence behavior
1. you can view consequences as being either unlearned or learned
   a.) unlearned consequences satisfy biological or survival needs— these needs are common to all of us
   b.) learned consequences do not satisfy survival needs; we "learn" to place a value on them and as such, they are not common to all of us
2. Positive consequences can be classified as social or non-social (biological, material, activity, and token)
   a.) social consequences-- involve a person's social behavior
   b.) biological consequences-- involve desired foods
   c.) material consequences-- involve things or objects that have attained value for the child
   d.) activity consequences-- involve preferred activities, behaviors the child really enjoys doing
   e.) token consequences-- involve originally neutral objects which become important to the child because of their exchange value; tokens can be earned and then traded for desired objects or activities
3. Negative or Punishing consequences-- really involve two aspects: inflicting pain (punishment) or time-out from positive consequences
a.) punishment— common child-rearing method because:
   1.) easy to do
   2.) temporarily does stop behavior
   3.) relieves anger of parent
   4.) no other effective methods known well
b.) undesirable side effects of punishment
   1.) adverse emotional reactions in child— hate and anger toward parent
   2.) avoidance-escape behavior
   3.) aggressive model for child’s behavior
   4.) children readily adapt to increasing levels of punishment
   5.) does not teach child any acceptable alternative behaviors
c.) occasions when punishment should be used
   1.) when behavior occurs very often
   2.) when behavior is quite intense and a danger to the safety of the child or others
   3.) when other consequences outside of parents’ influence are maintaining the behavior
d.) time-out from positive consequences— when used properly, no undesirable side effects

V. Examples of ineffective uses of consequences to teach child behaviors
   1. teaching infant to cry
   2. teaching children to be noisy
   3. parental attention maintaining inappropriate child behavior

VI. Effective uses of consequences to teach child behaviors
   1. Techniques for increasing desired behaviors
      a.) using positive consequences— general rule: to increase a desired behavior, follow it with a positive consequence
         1.) social consequences— better to praise the specific behavior, not the whole child
         2.) ear-shotting— pick out a part of the behavior you want that does occur and remark positively about it to someone within "ear-shot" of the child
      b.) importance of immediacy and consistency in teaching new child behaviors using positive consequences
         1.) the positive consequence should follow the behavior immediately to be effective
         2.) at first, provide the positive consequences continuously (each time the desired behavior occurs), then switch to intermittently (every so often to maintain the behavior)
c.) techniques for increasing the value of consequences
1.) **pairing**— if initially weak consequences are paired with already strong consequences, the weak ones gain in strength so that eventually they can be used alone to influence child behaviors

2.) **deprivation**— deprive the child for a short time of the consequences in question and they will become more valuable

3.) **satiation**— a steady diet of one thing may lead to disinterest in it; therefore, change consequences often

d.) using **token consequences**
   1.) make a list of valuable, desired items and indicate to the child how many tokens are needed to purchase a particular item
   2.) use concrete tokens that the child cannot get anywhere but from you

e.) the technique of shaping behavior
   1.) do not expect too much of the child all at once
   2.) break the behavior down into mini-goals and increase the child's behavioral requirements gradually

f.) the technique of prompting behavior— used if the behavior is extremely difficult to get going in the first place
   1.) physical prompting— physically assisting the child with the desired behavior
   2.) verbal prompting— verbally assisting the child with the desired behavior

g.) use of **signs and reminders**
   1.) make signs, such as "praise", and hang them in a place where you will see them often daily in order to help you use positive consequences
   2.) have another family member "count" your frequency of using positive consequences

2. **Techniques for decreasing undesirable behaviors**
   a.) **extinction**— remove the customary consequence, such as attention, for the behavior; in other words, totally ignore it
      1.) important also to provide positive consequences to an acceptable behavior which is incompatible (nearly opposite) with the one you are ignoring
      2.) do not give up on your extinction technique if there is a temporary increase in the undesired behavior— this is a normal occurrence
   b.) **time-out** from positive consequences— brief period of isolation (e.g., a five minute limit)
1.) similar to penalty box in hockey
2.) time-out room should be quiet, isolated and very dull
3.) use time-out in calm, matter-of-fact way and provide clear-cut steps to the child for earning back positive consequences for acceptable behavior
4.) as with extinction, provide positive consequences for an acceptable behavior which is incompatible with the one you are using time-out on

c.) punishment— inflicting pain in some form
1.) use sparingly and keep focus on retraining acceptable behaviors with positive consequences
2.) use punishment when behavior is of a very serious nature or after a dedicated application of positive consequences for acceptable behaviors has been totally ineffective

VII. Always include the child and other family members in your change program. Be precise in defining desired behaviors for change to your child— the more concrete description with clear-cut steps for the behavior indicated makes it easier for the child to learn efficiently.

VIII. Design a change program to use on both behaviors you are recording— you will first change one behavior in the desired direction and then use the same technique on the second behavior.

Be as specific as possible for your change program; determine effective positive consequences for your child and how they will be used to change the behavior.

Let the group leader know exactly what you plan to do before beginning your change technique in the home.
CONSEQUENCE LISTS
(Meeting 2)

SOCIAL CONSEQUENCES— the social behavior of people

1. **Words and phrases of praise**
   - good
   - good job
   - well done
   - great
   - nice
   - that's right
   - excellent
   - thank you
   - I'm very pleased with that
   - I'm proud of you
   - you should show this to your father (mother)
   - brilliant
   - terrific
   - swell
   - nifty
   - top-notch
   - first-rate
   - tremendous
   - outstanding
   - I like that
   - I love you
   - that was very kind
   - (thoughtful) of you

2. **Expressions of acceptance**
   - smiling
   - laughing
   - winking
   - nodding up and down
   - looking interested
   - blinking rapidly

3. **Nearness to child**
   - walking together
   - eating together
   - sitting on child's bed with him
   - playing games together

4. **Physical contact with child**
   - stoking arm
   - holding hand
   - shaking hand
   - squeezing hand
   - sitting on your lap
   - hugging
   - kissing
   - touching hand or shoulder
   - patting head, hand or shoulder

All of the above simply involve giving attention to the child in a pleasant way. When used consistently, they are very powerful influencers for desired child behaviors. Begin "attaching" them to the behaviors you want in your child.
BIOLOGICAL CONSEQUENCES— desired foods

jawbreakers
life savers
lemon drops
cake
pie
m and m's
candy bars
lollipops
gum
raisins
cookies
crackers
peanuts
popcorn
potato chips
popsicles
marshmallows
apples
fruits
ice cream
juices
soft drinks
MATERIAL CONSEQUENCES— things or objects which are of value to the child

coloring books
paints
pictures
puzzles
cartoons
comics
balloons
money— play or real
stamps
new clothes
watches
silly putty
clay
dolls
records
new bicycle
all kinds of toys
  jump ropes
  yo'gos
  plastic toys (animals, Indians, soldiers)
  Hot Wheels
  model airplanes, cars, or boats
  whistles
  squirtguns
  jumping beans
  toy musical instruments
  kites
  balls
"surprise box"— filled with wrapped "surprise" packages of desired objects and envelopes containing written descriptions of desired activities the child may engage in
ACTIVITY CONSEQUENCES— activities the child really enjoys

going first at anything
running errands
taking care of pets
helping to make cookies, candy or dinner
choosing dessert for the family
swinging
camping
riding bicycle
getting to stay up later than usual
watching television
seeing a movie
listening to radio, records
playing games with friends, parents
having friend stay overnight
staying at friend's home overnight
going shopping
having special time with parent
looking at books, reading
being read to
helping father "drive" car
taking a special trip (to zoo, amusement park, relative's home, etc.)
not having chores to do for a specified period of time
TOKEN CONSEQUENCES—originally neutral objects which become important to the child because of their exchange value; they can be traded for desired objects or activities:

- pennies
- marbles
- tickets or coupons
- special slip of paper (with parent's initials on it)
- stars
- poker chips
- checker pieces
- paper clips
- toothpicks
- metal washers
- brass rings
- paper money
- marks in a book or on a piece of paper
- punches on a card

It is best to pick a concrete token that the child cannot get anywhere but from you.

Also, you should have a written catalog listing what the tokens can be exchanged for and specifying the cost to the child.

Example of Token System

<table>
<thead>
<tr>
<th>Item</th>
<th>Number of Tokens (Points)</th>
</tr>
</thead>
<tbody>
<tr>
<td>model airplane</td>
<td>5</td>
</tr>
<tr>
<td>kite</td>
<td>5</td>
</tr>
<tr>
<td>baseball</td>
<td>5</td>
</tr>
<tr>
<td>penny</td>
<td>5</td>
</tr>
<tr>
<td>new shirt</td>
<td>5</td>
</tr>
<tr>
<td>Hot Wheels</td>
<td>5</td>
</tr>
<tr>
<td>new bicycle</td>
<td>50</td>
</tr>
<tr>
<td>choosing dessert</td>
<td>5</td>
</tr>
<tr>
<td>choosing camping site</td>
<td>10</td>
</tr>
<tr>
<td>having friend stay overnight</td>
<td>10</td>
</tr>
<tr>
<td>not having any chores for a week</td>
<td>15</td>
</tr>
<tr>
<td>choice of one package or envelope from &quot;Surprise Box&quot;</td>
<td>15</td>
</tr>
</tbody>
</table>
Possible Questions Concerning the Approach Advocated

1. Shouldn't the child behave appropriately in the first place?
   a. Not necessarily—it depends on how he has learned his behaviors; if some of the child's behaviors are inappropriate, it simply calls for parental retraining of the child in those behaviors.
   b. The methods I have advocated appear to do that retraining best.

2. The outside world isn't the way you have advocated—if we start systematically applying positive consequences for the child's acceptable behaviors now, what will happen when he leaves home?
   a. Because of your application of the methods advocated, your child will actually be better equipped for the outside world.
   b. Our traditional child-rearing approach is "discontinuous"—the child is thrown into the outside world poorly equipped.
   c. The approach I have advocated makes your child rearing a "continuous" process—you start preparing the child for the real world at the earliest possible age; that way, the child learns early that desired consequences are his for the taking as long as he is willing to work for them—this builds maturity, responsibility and independence in the child.

3. But aren't we still bribing a child to do what is expected of him?
   a. A parent should not "expect" anything of a child; a parent should train and teach the child appropriate behaviors.
   b. Bribery with adults—payment for performing illegal or immoral act; this does not apply to approach suggested.
   c. Bribery with children—payment "after the fact"; for example, "allright, I'll give you a dime if you do the dishes".

      This way, you are rewarding the child for not doing something he was supposed to do in the first place—it is indeed a bribe and a very poor method of child rearing.

      While with the approach suggested, the conditions are always set up beforehand—the child is given a positive consequence only if earned.
4. Favoritism—shouldn't all children be treated equally? Won't the other children in the home feel left out if we focus on changing the behavior of one child by providing positive consequences?

   a. Regarding equal treatment, there is rarely a concern about individualizing punishment if a particular child requires it; in the same fashion, there should be no great concern about individualizing positive consequences for a child who needs them in learning new behaviors.

   b. If the other kids did complain about being left out—use a "sharing of earnings"; when the child you are working with meets his acceptable level of behavior, all the children could share in some of his positive consequences.

5. What about time? I simply do not have the time to devote each day to the methods you advocate.

   a. You already do devote a considerable portion of your time to child-rearing concerns—all I am saying is put that time to more effective use.

   b. Spend a little more time initially in effectively training your child for acceptable behaviors and you will spend much less time later in attempting to handle inappropriate behaviors through arguing, fighting, and worrying.
OUTLINE OF PARENT INSTRUCTIONAL PROGRAM
(Meeting 3)

I. Review of previous instruction
   1. parents take 25-item quiz
   2. grade and discuss quiz
   3. discuss and clarify parents' additional questions concerning any part of previous instruction

II. Group leader check parent graphs of child behaviors—emphasize again the importance of at least one independent observation per week

III. Group leader and parents assist each parent individually in devising practical and systematic change program to be used on each child behavior successively
OUTLINE OF PARENT INSTRUCTIONAL PROGRAM  
(Meeting 6)

I. Brief summary of parent program

The parent program involved instruction in the theory and application of behavioral change techniques. The theory considered the kinds of behavior, how behavior is learned, and how behavior can be retrained by a systematic use of consequences. The application involved the parents' use of behavioral change techniques to alter two child behaviors in the home.

II. Future implications of parent program

The major goal of the parent program was to give the parents structured practice in the practical application of behavioral change techniques so that the parents could utilize any of the techniques learned on future occasions with a minimum of outside consultation. The five-week program was a step in that direction.

III. Immediate implications of parent program

1. The immediate goal of the parent program is to assess whether the child behavioral changes persist after the formal group meetings have ended.

   To do this, continue your change program on the two child behaviors dealt with and mail your graphs to the group leader weekly.

2. To help you better to integrate your new learning, design a new change program for any family member and carry it out during the next three weeks—refer to your past notes and outlines to aid a systematic application in this endeavor.

IV. The final meeting will be held—Tuesday, June 20.
I. Some Major Points to Remember

1. Because most of our behavior is learned, it is a major responsibility of parents to teach acceptable behaviors to their children; it is only after behaviors are taught that they can become internalized.

2. Parents often need first to use external rewards when teaching behaviors to children—this is so because often the behaviors we value as adults are still meaningless for a child; examples of such behaviors might be good study habits, good table manners or settling arguments through discussion rather than fighting.

3. Once acceptable behaviors have been established in a child through parental teaching, usually all that is necessary for behavioral maintenance is the intermittent use of positive social consequences, particularly praise.

4. One of the major points the parent program attempted to exemplify was that a systematic, consistent use of the behavioral principles discussed will almost always result in positive behavioral changes.

   However, a loose, unstructured application of the same behavioral principles will usually result in failure—a most important aspect of the application of sound behavioral techniques is parental consistency; the techniques of observing, counting, recording and graphing behaviors are significant aids in maintaining consistency.

5. As a concluding remark, child rearing (being a good parent) is demanding work—-it is hoped, however, that a continued application of the behavioral principles and techniques discussed throughout the parent program will assist you in channeling a majority of that work into real joy.

6. Following is a list of recommended books which deal with the application of behavioral techniques in child rearing. You are encouraged to obtain one or a few of these in order to extend and refine the significant gains you have made by participating in this program.
SELECTED BIBLIOGRAPHY


II. Discussion of parental follow-up data and any additional change programs initiated during the past three weeks.

III. Open discussion of any topics related to the entire parent program.

IV. Closure of parent program.
APPENDIX G

PARENTAL CHOICES OF CHILD BEHAVIORS FOR CHANGE, BEHAVIORAL
GOALS AND BEHAVIORAL CHANGE TECHNIQUE IMPLEMENTED
Behavior 1: getting self to breakfast table in morning after mother's first call

Behavioral Goal 1: to decrease number of minutes it takes child to get to breakfast table in morning after mother's first call

Behavior 2: verbal or non-verbal interruptions of other family members— including speaking to a family member who is already actively engaged in conversation or activity with someone else or tugging at clothes, raising hand, etc., in order to gain attention of other family member already actively engaged with someone else

Behavioral Goal 2: to decrease number of verbal and non-verbal interruptions of other family members

Behavioral Change Technique to be Used: Praise Plus Tokens
Mrs. B

Child: Timmy
Age: 11

Behavior 1: taking the trash out daily after school

Behavioral Goal 1: to decrease number of minutes it takes child to take out trash after school

Behavior 2: doing arithmetic homework after dinner

Behavioral Goal 2: to decrease number of minutes to complete arithmetic homework after dinner

Behavioral Change Technique to be Used: Praise Plus Tokens
Mrs. C

Child: Keith, Donald
Age: 10, 7

Behavior 1: Keith's verbal and physical "irritating" behaviors directed toward siblings— including hitting, pushing, taking other's objects, or calling others derogatory names

Behavioral Goal 1: to decrease number of child's hits, pushes, taking of other's objects, and name-calling behaviors

Behavior 2: Donald's "happiness" behaviors— including smiling, laughing, and initiating play with other children

Behavioral Goal 2: to increase number of child's smiles, laughs, and play initiations with other children

Behavioral Change Technique to be Used: Praise Plus Tokens
Mrs. D
Child: Darla
Age: 7

Behavior 1: leaving personal clothing objects (including shoes, slippers, bath towels) in improper areas of house— that is, not in clothes chute when dirty or put in proper place when clean

Behavioral Goal 1: to decrease number of child's personal clothing objects left in improper areas of house

Behavior 2: verbal and physical "aggressiveness" toward older sister— including name-calling, verbal statements implying superiority, hits, pushes, or dirty looks or grimaces at sister

Behavioral Goal 2: to decrease number of verbal and physical "aggressive" behaviors toward older sister

Behavioral Change Technique to be Used: Praise Plus Stars on Chart
Mr. and Mrs. E  
Child: Steve  
Age: 7

Behavior 1: making bed in the morning before going to school  
Behavioral Goal 1: to decrease number of minutes it takes child to make bed in the morning

Behavior 2: taking out the trash after dinner  
Behavioral Goal 2: to decrease number of minutes it takes child to carry out the trash after dinner

Behavioral Change Technique to be Used: Praise Plus Showing Graph
Mr. and Mrs. F

Child: Becky
Age: 7

Behavior 1: leaving personal clothing objects (including all clothing, shoes, slippers) in improper areas of house

Behavioral Goal 1: to decrease number of personal clothing objects left in improper areas of house

Behavior 2: making "silly" (out of context) verbalizations in referring to places, things, people, or thoughts

Behavioral Goal 2: to decrease number of "silly" verbalizations

Behavioral Change Technique to be Used: Praise Plus Stars on Chart
Mr. and Mrs. G
Child: Peter, Sally
Age: 7, 3

Behavior 1: written words misspelled during evening spelling homework assignment

Behavioral Goal 1: to decrease number of incorrectly spelled written words during evening spelling homework assignment

Behavior 2: verbal and physical "expressions of anger"-- including yelling, making verbal threats to other family members, and kicking and slamming doors

Behavioral Goal 2: to decrease number of yells, verbal threats, and kicking and slamming of doors

Behavior 3: verbal interruptions of other family members while they are engaged in conversation

Behavioral Goal 3: to decrease number of verbal interruptions of other family members

Behavioral Change Technique to be Used: Praise, Candy and Monetary Bonus
Mr. and Mrs. H  
Child: Daniel  
Age: 8

Behavior 1: taking of objects that do not belong to him— including money (25¢ equal to one object) and any other material objects obviously not belonging to him

Behavioral Goal 1: to decrease number of objects taken by the child

Behavior 2: temper tantrum behaviors— including hits, pushes, kicks, screams, or throwing of objects

Behavioral Goal 2: to decrease number of hits, pushes, kicks, screams, and throwing of objects

Behavioral Change Technique to be Used: Praise Plus Tokens
Mr. and Mrs. I  
Child: Denny  
Age: 9

Behavior 1: child's persistent verbal statements after being told "no" by parents

Behavioral Goal 1: to decrease number of child's persistent verbal statements after being told "no" by parents

Behavior 2: verbal "commanding" behaviors directed toward parents or other children

Behavioral Goal 2: to decrease number of child's verbal "commanding" behaviors toward parents or other children

Behavioral Change Technique to be Used: Time-out Plus Praise
APPENDIX H

QUIZ FOR PARENTS ON INSTRUCTION IN BEHAVIORAL CHANGE
TECHNIQUES AND RESULTS OF QUIZ FOR INDIVIDUAL PARENTS
QUIZ FOR PARENTS ON INSTRUCTION IN BEHAVIORAL CHANGE TECHNIQUES

TEST INSTRUCTIONS: CHOOSE THE ONE BEST ANSWER AND BLACKEN THE CORRESPONDING LETTER ON THE ANSWER SHEET

1. There are two main kinds of behavior; going for a walk is an example of which kind?
   a. reflex
   b. operant
   c. necessary
   d. healthful

2. The first step to take in changing any child behavior is:
   a. to describe the behavior accurately
   b. to hope the child will grow out of it
   c. to ignore the child
   d. to praise the child

3. It is important to first do "hidden recording" of a child behavior:
   a. because it's fun to be "sneaky"
   b. so the child won't be embarrassed
   c. to get an accurate record of the true frequency of the behavior
   d. because children cannot understand their own behavior

4. Counting the number of times a child hits or pushes his sister is an example of:
   a. event recording
   b. duration recording
   c. direct measurement of permanent products
   d. frustration recording

5. A record of a child's behavior which shows about the same frequency of the behavior each day is an example of a (an):
   a. ascending baseline
   b. descending baseline
   c. stable baseline
   d. false baseline
6. Because some behaviors may be difficult to record accurately, a second observer independently records the same behavior at the same time— **independently** means:

   a. the two observers discuss the occurrence of the behavior while they are recording it
   b. the two observers are mature persons
   c. two different recording methods must be used
   d. each observer is not aware of the other's recording

7. A basic "law of behavior", stressed by the group leader, is that:

   a. a child is born with bad behaviors, so parents cannot change them
   b. behavior is influenced by its consequences, so parents can change child behaviors by systematically arranging consequences
   c. it is natural for children to misbehave
   d. a parent must accept things the way they are

8. If a parent gives a child a piece of candy each time the child takes out the trash promptly, it is more likely that this behavior will ________?________ in the future.

   a. increase
   b. decrease
   c. remain the same
   d. stop permanently

9. Winking at your child immediately following an acceptable behavior is an example of using a (an):

   a. unlearned consequence
   b. material consequence
   c. social consequence
   d. reprimand

10. A parent's telling a child he may watch television after he has successfully completed his homework assignment is an example of using:

    a. punishment
    b. extinction
    c. biological consequences
    d. activity consequences

11. "Tokens" acquire value because:

    a. they are already positive consequences
    b. they are negative consequences
    c. they can be exchanged for desired consequences
    d. they are necessary for life
12. One reason punishment (inflicting pain) is a common child-rearing method is because:
   a. it usually does temporarily stop a child behavior
   b. it always permanently eliminates a child behavior
   c. the Romans used it
   d. it is the best method available for teaching acceptable child behaviors

13. If a mother continuously provides social consequences (attention, affection, nearness, etc.) each time an infant cries, it is most likely that the infant will:
   a. stop the crying behavior completely
   b. continue the crying behavior
   c. become "neurotic"
   d. have low blood pressure

14. The general rule for a parent to follow in order to increase a desired child behavior is:
   a. to follow the behavior immediately with a positive consequence
   b. to ignore the behavior
   c. to let "nature" increase the behavior
   d. to expect the child's teacher to increase the behavior

15. The technique of ear-shotting can:
   a. destroy a child's self concept
   b. cause deafness in the child
   c. establish a new desired role in a child
   d. never be effective in teaching a child desired behaviors

16. A gambler keeps "playing the game" because:
   a. he enjoys losing his money
   b. he receives the positive consequences of money every so often
   c. he is immature
   d. he has a serious problem

17. Consistently following praise with a biological consequence will increase the value of praise—this behavioral technique is called:
   a. pairing
   b. schizophrenia
   c. satiation
   d. deprivation
18. The technique of "shaping" a behavior means:
   a. making a clay imitation of it
   b. starting a change program in small steps and gradually approaching the desired level of the behavior
   c. requiring a child to perform at the desired level of the behavior immediately
   d. reasoning with the child about why he should be good

19. Making signs, such as "praise Jimmy each time he takes out the trash", will help the parent to:
   a. become an author
   b. "catch the child being good"
   c. focus on undesired behaviors
   d. use punishment more frequently

20. When using the technique of extinction to decrease an undesired child behavior, usually the behavior will:
   a. get worse before it gets better
   b. stop immediately
   c. become schizophrenogenic
   d. stay about the same forever

21. The behavioral technique of time-out from positive consequences:
   a. should never be used for less than a one-hour period
   b. will always have many undesirable side effects
   c. involves a very brief time period
   d. can never be used to teach desirable child behaviors

22. Parental using of the techniques advocated by the group leader will tend to make child rearing a (an) _______?_______ process.
   a. discontinuous
   b. continuous
   c. haphazard
   d. fluctuating

23. A final worthwhile goal of parental application of the behavioral techniques suggested is:
   a. to assist the child in gradually assuming more and more responsibility for his own behavior
   b. to cause more work for the parents concerning child rearing
   c. to make the child forever dependent on his parents
   d. to let the child know he will be a failure in life
24. When it is extremely difficult to get a behavior going, the parent might physically assist the child with the behavior—this behavioral technique is called:

a. child abuse  
b. extinction  
c. punishment  
d. prompting

25. Often "motivation" for desired child behaviors has to be provided from outside before it can get within the child; to aid a child's motivation, a parent could give the child a poker chip (which could later be traded for desired items) each time the child completed a desired task—this is an example of using:

a. extinction  
b. time-out from positive consequences  
c. token consequences  
d. activity consequences
### TABLE 7

**RESULTS OF QUIZ**

<table>
<thead>
<tr>
<th>Name</th>
<th>Score</th>
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<tr>
<td>Mrs. A</td>
<td>100</td>
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<tr>
<td>Mrs. B</td>
<td>68</td>
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<tr>
<td>Mrs. C</td>
<td>80</td>
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<td>Mrs. D</td>
<td>92</td>
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<tr>
<td>Mr. @ Mrs. E</td>
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<td>Mr. @ Mrs. F</td>
<td>96</td>
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<td>96</td>
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<tr>
<td>Mr. @ Mrs. H</td>
<td>88</td>
</tr>
<tr>
<td>Mr. @ Mrs. I</td>
<td>100</td>
</tr>
</tbody>
</table>

\[a \text{ the score is based on a scale of 0-100}\]
The purpose of this questionnaire is twofold:

A.) to assist you, the parent, in thinking through and integrating the positive benefits you have gained by participating in the parent program

B.) to assist the group leader in developing better parent programs in the future

Mark an X in the space provided for the five rating questions and answer the other four questions on the separate paper given you.

Please return this questionnaire by mail to the group leader sometime within the next week. Thank you for your cooperation.

1. The major parental goal of the program was to change two child behaviors; how would you rate your success in this endeavor?
   Superior____ Good____ Average____ Poor____ Failure____

2. As noted by the group leader early in the program, often when a parent successfully alters just one or two child behaviors, many dramatic positive changes come about within the entire family. Have other positive changes occurred within you and your family as a result of focusing on just two child behaviors for change? If yes, briefly describe these other beneficial changes.

3. Considering yourself before taking part in this parent program, how would you now rate your skills and confidence as a parent?
   Greatly Improved____ Slightly Worse____
   Slightly Improved____ Greatly Worse____
   About the Same____

4. Why did you enroll in the parent program in the first place?

5. Based on what you have learned during the parent program, how would you rate your ability to change any child behavior in the future?
   Superior____ Good____ Average____ Poor____ Failure____
6. Other than verbal social consequences (good job, I'm extremely pleased with that, etc.), the group leader used no other extrinsic consequences on you, the parent; what motivated you to take time out from your busy schedules and carry out the structured change programs? Did you notice any difference in your level of "motivation" at any particular times during the five-week program?

7. How would you rate the group leader's presentation of the instructional program?
   Superior ___ Good ___ Average ___ Poor ___ Failure ___

8. How would you rate the overall organization of the instructional program?
   Superior ___ Good ___ Average ___ Poor ___ Failure ___

9. Any suggestions how future programs of this nature might be improved? How could the group leader improve his presentation? How could the overall program be organized better?
TABLE 8
RESULTS OF PARENT PROGRAM QUESTIONNAIRE

<table>
<thead>
<tr>
<th>Name</th>
<th>Superior or Greatly Improved</th>
<th>Good or Slightly Improved</th>
<th>Average or About the Same</th>
<th>Poor or Slightly Worse</th>
<th>Failure or Greatly Worse</th>
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</thead>
<tbody>
<tr>
<td>Mrs. A</td>
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<td>Mrs. B</td>
<td>3,7,8</td>
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<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<sup>a</sup> Numbers in the table depict the number of the question in the parent program questionnaire.
Mrs. A

2. With Sandy, the first payment of tokens was immediately "cashed in". As the program has progressed, she has shown some maturity in preplanning the use of her accumulation of tokens.

Ralph's response was almost immediate. He now seems to be more aware himself of the problem and the improvement is carrying over to other meals many times (when no reward is involved).

4. After checking into what the program would be like, I wanted to see for myself. Also, as an interested parent in the school's future, I feel when new programs are being implemented, we owe it to the school to determine if they are effective and valuable.

6. Once committed, I like to carry through a project (even if I am late doing it). That carried me through the silent observation period. The fun of working with the kids on a new concept probably gave me a burst of motivation each time we instituted the reward program. The exchange of ideas between the children and us was most rewarding when we discussed the program—more fun than just saying no to each behavior I didn't want.

9. No change--I liked the presentation.
2. Timmy and I are closer than before. I now take the time to answer his questions and listen to his problems.

4. I enrolled hoping I could help my children and understand them better.

6. Just knowing that some of my son’s behaviors could be changed. I was discouraged at first when Timmy took so long to do his work.

9. I thought the program was very good. The program was presented at a level in which I could understand it. If I were to do this again, I would not want it done any other way.
Mrs. D

2. Better understanding between parent and child. Child (children) more cooperative in other areas since project started.

4. I feel one of the most important goals of parenthood is to mold a child into a responsible, independent and mature person. I felt taking this course would ease some of the problems that occur in obtaining this goal and therefore lessen the strain of "growing up" for all of us.

6. Concern for my children— see above. As well as your interest in my child (phone calls, home visits, etc., when one missed a meeting). Level of motivation increased with results.

Mr. and Mrs. E

2. As a result of this program, my younger son has tried to follow in big brother's footsteps. Since Steve is the oldest, I'm sure it's going to make it easier with the two younger ones. I've benefited by the program because I now know it is possible to change any child behavior. I've also learned it does take time and patience. With feeling this way--it makes a household more calm.

4. I'm interested in anything I can do to improve myself as a mother; as well as making improvements in my children. I felt it was worthwhile to give it a try.

6. I explained why I started the program in No. 4. After I had started, I enjoyed it and felt like it would work.

9. As far as organizing the program, the only suggestion I have is to try to give more information on the program when parents are first contacted.
Mr. and Mrs. F

4. Probably to see what was to be discussed and we are always open and interested in being the best parents possible.

6. Probably just in order to see if the suggestions could work for our family. At the first week of change, we were pleased with the results and therefore thought the program was good. About the second week, we were a bit skeptical or bored.

9. I really believe more than 6 couples could be in a group in order to get more varied responses and to allow for dropouts. Since each child's entire personality and actions need to be understood and developed to the best possible level, how about also having an identical program with the first, second, and third grade teachers, having them pick out 2 children with real problems in class and using the baseline, change techniques, etc., and then also having this program with those parents. In other words, help the whole child (both at school and home). I really felt that a lot of parents' time was taken up on minute problems (bed making, spelling words, picking up clothes) when there are children in the district with serious personality problems. I think that we could have learned and carried out in 1 or 2 sessions our change technique.
My first reaction to the return address on the envelope was surprise, apprehension and curiosity. The letter, I felt, held possibilities which I felt were worth investigating.

I am always open to any suggestion as to improving children's behavior. I don't believe there is any such thing as a perfect parent.
Mr. and Mrs. H

2. When we made these behavior changes with Daniel, the other children felt left out. My little girl especially feels left out—cries more and wants more attention. So, I'm trying to spread myself to where I'm devoting the time for all, not just one in particular.

4. We both enrolled due to the fact we have four small children—we knew we needed some help with the problems we were having. A parent who has a child, whether it be one or twenty-one, can't think they have no problems. Daniel was a twin, born seven months, 4 lb., 8 oz.; he had trouble talking, walking, etc. So, we have always had problems but we needed help mainly with two very important problems. And, with your help, it has improved.

6. We used the token, star method. We noticed a great difference. You wouldn't believe!!

9. Yes, your letter sort of puzzled us at first also. Like I mentioned above, a lot of parents feel their children can do no wrong—have no problems. I was very anxious to find out if I could help Daniel and stop him from especially taking things that don't belong to him. I am awful glad I did—I hated to miss the three meetings. I've had nine children; four living—I wanted children but can't have any more—if you love your children, you want to help them, not hurt them. I would have hurt Daniel in the long run by encouraging him to go ahead and take things he wanted.

Your presentation was fine—no change whatsoever. It was great. Start the meetings the same time but have a five-minute break.
Mr. and Mrs. I

2. The other child is picking up the good behaviors.

4. We had just been told our child had a learning disability and thought this program was connected to it.

6. We're extremely interested in doing whatever we can to help our children. Yes, when we started seeing results.

9. I, personally, feel that it would be better not to have parents from the same neighborhood.
APPENDIX J

MRS. B'S TOKEN SYSTEM FOR TIMMY
Menu For Timmy

Looking at television for one hour .................. 1 token
Listening to records .................................. 1 token
Playing with friends after school .................. 2 tokens
Riding bicycle .......................................... 1 token
Going to day camp with girl scouts .............. 15 tokens
Staying up 15 minutes later than usual .......... 2 tokens
Buying one record album .............................. 10 tokens
Getting 25¢ when requested ........................ 2 tokens
Using b-b gun ........................................... 10 tokens
Getting one tube of b-b's ............................ 3 tokens
Getting a special food treat, such as pizza and pepsi .. 5 tokens


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