



5-1971

## The Application of Principles of Behavior Modification and Control by the School Social Worker

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### Recommended Citation

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THE APPLICATION OF  
PRINCIPLES OF BEHAVIOR MODIFICATION AND CONTROL  
BY THE SCHOOL SOCIAL WORKER

By  
Jill Cannon  
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May, 1971

SENIOR HONORS PAPER  
DEPARTMENT OF SOCIOLOGY

May 1971

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It is my contention, from my experiences within the field of social welfare, that social workers must become more professional if they are to make any effective contributions to the problems of the society in which they live. Many of the efforts of social workers to which I have been exposed have been unsystematic, ineffective, and unscientific and not based upon any known principles of behavior - "hit and miss" methods of dealing with problems which are usually more "miss" than "hit". Thus, out of a growing concern for the lack of professional and scientific techniques being utilized by social workers, I have become interested in the principles of one of the behavioral sciences - behavior modification - and its potential for application to and implementation in the field of social work.

Before proceeding any further in an attempt to analyze the possible contributions of this behavioral science to the field of social work, it is essential, I think, to determine what is meant by "behavior modification". According to Webster's dictionary, to modify means to alter or change; "behavior modification" would thus be the process by which behavior is altered or changed. From a slightly different point of view, Ullmann and Krasner state, in A Psychological Approach to Abnormal Behavior, that behavior modification primarily involves the changing of behaviors that have been labeled socially deviant.

In addition, they write that the term "behavior modification" may be applied to many different techniques used with a broad spectrum of educational and behavioral problems by people of varying professional and nonprofessional affiliation.<sup>1</sup>

In order to analyze the potential contributions of behavior modification, it is also necessary to define and discuss basic terminology and principles of this methodology.

Behavior modification is a form of operant conditioning, in which the "critical events" or events of interest and importance are the environmental consequences of behavior. The environmental consequences of the behavior are viewed as having an influence upon whether or not the behavior will be repeated in the future. Positive reinforcers increase the probability that the behavior which preceded them will occur under similar conditions in the future, while negative reinforcers increase the probability that the behavior which preceded their removal will occur under similar conditions in the future.<sup>2</sup> For instance, if a child who makes his bed is given attention and a cookie from his mother (positive reinforcers) immediately following this behavior, the environmental consequences (cookies and attention) of his behavior are such that this behavior will probably be repeated in the future. On the other hand, if the

<sup>1</sup>Ullmann and Krasner, A Psychological Approach to Abnormal Behavior (Englewood Cliffs, New Jersey: Prentice-Hall, 1969), p. 243.

<sup>2</sup>Jack Michael and Lee Meyerson, "A Behavioral Approach to Counseling and Guidance", in Guidance: An examination, ed. by Ralph L. Mosher, Richard F. Carle, and Chris D. Kehas; (New York, Chicago, Burlingame: Harcourt Brace & World, Inc., 1965), pp. 26-40.

child makes his bed and his mother immediately withdraws the requirement that he remain within his room or his restriction from watching the television (negative reinforcers), the environmental consequences of his behavior (being able to leave his room or watch television) are such that the probability of the behavior occurring under similar circumstances in the future is increased.

Another type of "conditioning" in psychology is respondent conditioning, in which the event of critical importance is the eliciting stimulus preceding the response. An unconditioned stimulus causes a reflex-type action - certain physical events in the environment are related to certain muscular and glandular activities in a relatively invariable way. On the other hand, a conditioned stimulus becomes a stimulus by repeated temporal pairing with unconditioned stimuli.<sup>3</sup> For instance, if a dog's glands produce saliva every time a piece of meat is presented to him, the meat would be called an unconditioned stimulus. However, if the person who fed the dog began to ring a bell every time he presented the animal with a piece of meat, simple ringing of the bell might cause the dog's glands to produce saliva. In this case, the ringing of the bell would have become a conditioned stimulus.

Whereas for reflexes and conditioned reflexes the event of critical explanatory importance is the eliciting stimulus preceding the response, for a large class of non-reflex behavior

<sup>3</sup>Ibid.

the critical events are the environmental consequences of the behavior. Such behavior can be said to "operate" on the environment, in contrast to behavior which is "respondent" to prior eliciting stimuli.<sup>4</sup> Because respondent conditioning, which is concerned with reflex behavior, is not particularly applicable to the modification of human behavior, most of the terminology and principles presented in this paper will be concerned with operant conditioning, which is relevant to behavior modification. However, the comprehension of stimuli and their influence on the probability of the occurrence of behavior is helpful when one is attempting to understand and modify behavior.

Perhaps the most basic technique of behavior modification is the positive reinforcement of selected responses. However, several other techniques are also used to modify behavior. One of these consists of the extinction of a response. Behavior is maintained by reinforcement, either positive or negative; when the reinforcing stimuli that currently maintain the behavior are removed, if the responses or behavior is followed by no consequences or by neutral stimuli, the person's response to a situation is likely to change and the behavior is likely to decrease in frequency.<sup>5</sup>

Aversive techniques are also sometimes used to modify behavior. The most commonly known type of aversive control is punishment, which, technically, refers to the operation of presenting an aversive stimulus contingent upon a response, or

<sup>4</sup>Ibid., p. 24.

<sup>5</sup>Ullmann and Krasner, p. 17.

removing a positive reinforcer contingent upon a response. Punishments tend to weaken behavior, while rewards tend to strengthen behavior.<sup>6</sup>

Escape and avoidance are two other types of aversive control. Escape is an environmental arrangement in which an organism's response can terminate an already present aversive stimulus, while avoidance is the prevention or delay of the onset of an aversive stimulus. Examples of this kind of control are easily found in parent-child interactions. A child's cleanliness is often maintained as an escape behavior where the aversive stimulus is the nagging verbal behavior of a parent. However, this same type of situation might sometimes constitute avoidance behavior, in which the aversive stimuli would criticism, scolding, or being made to wash over again. In school, study behavior is often maintained as avoidance behavior, where the aversive stimulus is criticism, failing grades, or removal of privileges.<sup>7</sup>

Two other concepts of reinforcement which are important to understand are satiation and deprivation. The effectiveness of a presumed reinforcing stimulus in affecting a given behavior may be manipulated by depriving the individual of that stimulus for a period of time, which is called deprivation, or providing such an abundance of the stimulus that stimulus is reduced, which is called satiation. Satiation weakens while deprivation strengthens the effectiveness of reinforcers.<sup>8</sup> For instance,

<sup>6</sup>Michael and Meyerson, pp. 30-31.

<sup>7</sup>Ibid, p. 30.

<sup>8</sup>Ullmann and Krasner, p. 17.



if a person has been deprived of any water or other liquid for several days, the reinforcing value of water will be greatly increased. However, if a person has just drunk a gallon of water, he will be considerably satiated and water will not at that time have a very strong reinforcing influence upon his behavior.

Shaping is another procedure for the modification and control of behavior which is frequently utilized. It is essentially a differential reinforcement of successive approximations to some complex form of behavior.<sup>9</sup> This means that perfection is not expected immediately and behavior is reinforced for improvement. For instance, although they may not realize it, most parents shape a child's speech by initially rewarding him for any gurgling or babbling that may even faintly resemble speech but progressively demanding increasingly more accurate approximations to actual words.

Just as stimuli may be either unconditioned or conditioned, so also may reinforcers be unconditioned or conditioned. According to Michael and Myerson, only a small proportion of the important consequences of human behavior are unconditioned reinforcers, which are attributable to biological characteristics. On the contrary, the majority of consequences are conditioned reinforcers, which acquire reinforcing properties as the function of experience.<sup>10</sup>

<sup>9</sup>Michael and Myerson, p. 26.

<sup>10</sup>Ibid., p. 25.

An important characteristic of much behavior, according to Michael and Myerson, is that it is repeated, either because the appropriate stimulus conditions persist or recur. If every occurrence of a repeatable response is followed by reinforcement, the behavior will continue until other variables exert control. On the other hand, if reinforcement is discontinued altogether, the behavior will cease.<sup>11</sup> This in my opinion is a vital hypothesis, for it is the factor which makes it possible for one person to modify and control the behavior of another.

If in the presence of a stimulus a response is reinforced, and in the absence of this stimuli it is extinguished, the stimulus will control the probability of the response in a high degree. Such a stimulus is called a discriminative stimulus. What effect do discriminative stimuli have on the behavior of human beings? According to Michael and Myerson:

Almost all important human behavior is under the control of discriminative stimuli. Although part of the educational process involves extensive shaping, particularly for motor skills, the educator's major effects are directed toward the development of discriminative repertoires, or in common terminology, knowledge.<sup>12</sup>

How then can we modify the behavior of another person? According to Michael and Myerson, this modification or control can be accomplished by altering the effectiveness of a particular class of consequences (reinforcers or punishers), which also alters the probability of behavior which has in part been affected by these consequences. They elaborate upon this idea by stating:

<sup>11</sup> Ibid, p. 27.

<sup>12</sup> Ibid.

It seems only natural that a person will repeat that which he can see will benefit him, and perform again those acts which he believes will terminate unpleasant conditions. . . . Any behavior which is followed by reinforcement. . . . is more likely to occur again in the same or similar situation. To increase the occurrence of a particular class of behavior, it is necessary only to ensure that reinforcement occurs relatively soon after the behavior.<sup>13</sup>

After studying the principles of behavior modification and the general ways in which this knowledge can be utilized to modify behavior, it is crucial, in my opinion, to apply this knowledge to a specific field of social work if one wishes to gain any useful and practical insight in terms of how behavior can be modified. Although behavior modification and control are frequently employed within institutions for the mentally retarded, readily-available situations exist in which behavior modification would be beneficial but is seldom utilized. For this reason, I have chosen an environment - the school - in which I feel that the social worker could increase his efficiency and effectiveness through the understanding and application of principles of behavior modification.

According to Mr. Dan Ambre, the school social worker for Unit 5 schools, Normal, Illinois, the role of a school social worker is multi-faceted, which makes it difficult to adequately define the function of a school social worker.<sup>14</sup> However, in an attempt to describe the job of a school social worker,

<sup>13</sup> Ibid, p. 29.

<sup>14</sup> Interview with school social worker, Mr. Dan Ambre, April 1971.

Florence Hollis divides the duties into four major types of services: one task consists of direct work with pupils; a second function involves mediation with teachers and other personnel - information exchange and joint planning about how to handle individuals, attempts to modify teacher practices on behalf of certain pupils; a third responsibility involves acting as consultants to teaching personnel - concerning improvement of classroom patterns, modification of teacher perceptions, or changes in school policy and procedure; and a final service consists of negotiating with families and agencies in the community.<sup>15</sup>

Somewhat more specifically, a pamphlet published by the Office of the Superintendent of Public Instruction of the State of Illinois lists several possible duties of a school social worker, which include:

1. participating in the identification and solution of school problems.
2. consulting with the classroom teacher to help the teacher better understand and work with particular children or manage particular classes of children.
3. practicing individual casework with students.
4. practicing group work with students.
5. working with parents as individuals or in groups.
6. working with family groups.
7. participating in case conferences with other school specialists (guidance counselors, school psychologists, nurses, etc.).

<sup>15</sup> Florence Hollis, Casework: A Psychosocial Therapy, (New York: Random House, 1966), p. 361.

8. working with non-education specialists (physicians, psychologists, psychiatrist, etc.).
9. organizing and participating in inservice training programs.
10. consulting with administrators and teachers on broad areas of mental health.
11. participating in the development of services which are needed in the community.
12. representing the school in the social concerns of the community.
13. interpreting school social work services to the community.
14. disseminating information to student groups.
15. supervising student school social workers.
16. participating in school research.
17. serving as a liaison between school and families and community agencies.
18. participating in professional social work organizations and attending regional and national conferences.
19. contributing literature to the field of school social work.<sup>16</sup>

According to both Mr. Ambre and Mrs. Marianne Beal, two social workers within the Bloomington-Normal Schools, due to a shortage of staff, the trend in school social work has been toward indirect, resource-type casework rather than direct, therapeutic casework with problem children. Thus, the caseworker is involved in considerable discussion and consultation with parents, community agencies, and school personnel - teachers, principals, nurses.<sup>17</sup>

<sup>16</sup>School Social Work in Illinois, Office of the Superintendent of Public Instruction, 1970, pp. 12-13.

<sup>17</sup>Interviews with Mr. Ambre and school social worker Mrs. Marianne Beal, April 1971.

In my opinion, this trend toward resource-type rather than therapeutic casework has several advantages: first, more families can be served; secondly, effects of treatment are more apt to carry over into the outside world if problems are dealt with in the normal classroom environment rather than in a special, isolated environment for problem children; thirdly, the social worker has the potential and opportunity to effect changes in the environment which causes and support undesirable behavior which is crucial, because if a social worker succeeds in bringing about changes in a child's behavior, but he then returns to an unchanged environment and is again exposed to the conditions which originally caused his undesirable, unacceptable behavior, the chances of his reverting back to the unacceptable behavior are considerable. In the words of Florence Hollis:

It appears essential that school social work practitioners must address themselves more fully to the conditions of the school, and not limit their efforts to contact with pupils. Unless the practitioner has intimate knowledge of teachers and their practices, classroom climates, and general school conditions, he cannot understand the particular circumstances that contribute to each pupil's problem situation. Unless there is close contact with other school personnel, the social worker cannot foster those opportunities for success and achievement here suggested as necessary for positive change. . . . When positive change does occur in one area or another, and even in a limited degree, the social worker must certify this improvement to teaching personnel. . . . Attempts to help malperforming pupils by treating them in isolation or as though abstracted, from the context of school circumstances must be viewed with extreme skepticism.<sup>18</sup>

<sup>18</sup>Hollis, p. 362.

In further support of this need for social workers to "address themselves more fully to the conditions of the school", Hollis adds:

The researchers' initial belief that school practices and conditions are a significant factor in malperformance has been buttressed by study findings. The implications of this view for the design of effective school social work patterns are worthy of note.<sup>19</sup>

The problems which school social workers are expected to undertake are educationally focused and arise out of a child's failure to function well, either academically or socially, in school.<sup>20</sup> This failure includes a wide range of problem behaviors, such as hyperactivity, stubbornness, lateness, aggressiveness, poor attendance, disruptive behavior and academic difficulties.<sup>21</sup>

In commenting about the duties of counseling and guidance personnel, (which includes the social worker) Michael and Meyerson state that much, perhaps most, of their present work consists of giving information and advice based on measured characteristics, capabilities, interests, and attitudes of clients and helping to resolve conflicts that arise when there are discrepancies among them, or between any of them and the requirements of the environment. Several tools which are currently important in the counseling and guidance professions are advice giving, information giving, interpretation and clarification, training and reconditioning, persuasion,

<sup>19</sup>Ibid.

<sup>20</sup>Interview with Mrs. Beal.

<sup>21</sup>Interview with Mr. Ambre.

encouragement and moral support, and subtle direction toward some things and away from others.<sup>22</sup>

Thus, from the viewpoint of Michael and Meyerson, the role of counseling and guidance personnel appears to be somewhat directive and controlling. They claim that "Even in psychotherapy, 'growth-inducing' and uncovering techniques did not come to be preferred to directive and controlling procedures because the therapist couldn't readily perceive the ineffective behavior of his clients that had to change if better adjustment was to occur."<sup>23</sup>

Because of their close acquaintance with malperforming students and their knowledge of the conditions that impinge on these pupils, social workers in schools, according to Florence Hollis, occupy a strategic situation. They have the opportunity to assist teachers and administrators in identifying those school practices and arrangements that inadvertently contribute to malperformance and that curtail learning and adjustment.

If the social worker concentrates his energies mainly on helping some pupils accommodate to the school, he can do little to ameliorate the patterns that will continue to generate difficulties for many other students. If he addresses himself primarily to attributes of the pupil (or his family situation) which seem to be contributing to malperformance, the effectiveness of his helping efforts will be greatly reduced. It seems important, therefore, that the social worker retain dual perspectives, and attempt to resolve problem situations or processes: both pupils and school conditions should be targets of his interventive activity. He must find ways of serving specific individuals while simultaneously dealing with the sources of pupil difficulties within the school.<sup>24</sup>

<sup>23</sup>Ibid., p. 43

<sup>24</sup>Hollis, p. 362.



For the problems traditionally assigned to counseling and guidance personnel, the relevance of the behavioral approach is "clear cut," because the great bulk of the problems here do not have disputed ethical implications. In schools, no one questions that it is better for children to learn the school subject matter than not to learn it; or that it is desirable to get along with other children and with adults without excessive conflicts; or that more is to be gained by staying in school than by dropping out. To a great extent, according to Michael and Meyerson, the "behavior that children 'should' engage in is known and agreed upon, and the task of the counselor is to facilitate and strengthen its emergence and maintenance." In attempting to accomplish this, the counselor who accepts the complete behavior system and works within it tends to ask more radical questions about some present school practices and to initiate more radical changes in counseling functions. For example, in connection with the critical school drop-out program, he would be less concerned with specifying the characteristics of students who drop out than in studying the kind and frequency of reinforcements that are available for school learning in comparison with other reinforcers and with the frequency of avoidance and punishment conditions that exist in the classroom. He would experiment with introducing token reinforcers and would analyze conditions under which a potential drop-out could be led to emit new responses in "a tight reinforcing feedback loop so as to shape behavior that would ultimately come under control of the natural reinforcers of the environment."<sup>25</sup>

<sup>25</sup>Michael and Meyerson, pp. 44-45.

According to Michael and Meyerson, human beings do not naturally like what the experience of the species indicates is necessary or good for them, and thus, the task of the counselor is to discover what is reinforcing to children with problems and to make these reinforcers contingent upon the desired behavior. Using drop-out students as an example, the two authors state that the behavior of drop-out students indicates that they are not receiving the "natural" reinforcers of the classroom that influence the school-going behavior of most children, or that these cannot compete in strength with other reinforcers (for behavior other than attending school). Thus, in attempting to reduce or eliminate drop-outs, the task of the school social worker is to discover what is reinforcing to potential drop-outs and to make these reinforcers contingent upon school learning. If the drop-out problem is a serious one and "we" believe that our society and economy require an educated population, and if monetary and social costs of large numbers of uneducated or undereducated persons are great, "there should be no hesitancy in taking advantage of scientific principles of learning to apply effective extrinsic reinforcers to help shape desirable behavior."<sup>26</sup>

Almost all approaches to counseling and guidance are in agreement that the goal of counseling is to affect behavior and that behavior is lawful phenomena whose laws can be discovered. In addition, there appears to be general agreement that the

<sup>26</sup> Ibid, p. 45.

crucial behavior of human beings is learned. Therefore, the critical questions in counseling and guidance relate to how behavior is learned and how it may be unlearned or altered. In contrast to other approaches in counseling and guidance, from the behavioral standpoint, relevant questions relate only to the behavior itself. What behavior must be created or maintained and what deficient or inadequate behavior must be altered?<sup>27</sup>

The social ramifications of this kind of behavioral approach are great, and many new kinds of counselor behavior will be required. "To a far greater degree than is presently the case, a behavioral counselor must be able to influence the consequences of behavior, as it is emitted, by personal action, by machines, and by enlisting the aid of teachers, parents, and school administrators in creating healthy behavioral environments."<sup>28</sup>

If this is truly paramount how then does a behavioral counselor begin "influencing the consequences of behavior"? According to Meyerson, Kerr, and Michael , there are four basic questions which one must ask:

1. What is the "desirable" behavior?
2. What is the criterion for success?
3. What behavior must be generated, extinguished or altered?
4. What will serve as a reinforcer?<sup>29</sup>

<sup>27</sup>Ibid., pp. 40-41.

<sup>28</sup>Ibid. p. 46.

<sup>29</sup>Lee Meyerson, Nancy Herr, and Jack L. Michael, "Behavior Modification in Rehabilitation," Child Development: Readings in Experimental Analysis (New York: Appleton-Century-Crofts, 1967), pp. 44-45.

In addition, Carl Rogers states that several elements exist which are common to different concepts of the application of science to human behavior: first, there must be some sort of decision about goals; secondly, counselors or therapists must proceed by methods of science to discover means to those end; thirdly, as conditions or methods are discovered by which to reach the goal, some person or some group must establish these conditions and use these methods; fourthly, individuals are exposed to the prescribed conditions, and this leads, with a high degree of probability, to the behavior which is in line with the goals desired; and finally, if the process described is put in motion, there is continuing social organization which will continue to produce types of behavior that have been valued.<sup>30</sup>

A behavioral approach to human control does not consist of a bag of tricks to be applied mechanically for the purpose of coercing unwilling people. It is part of a highly technical system, based on laboratory investigations of the phenomena of conditioning, for describing behavior and specifying the conditions under which it is acquired, maintained, and eliminated.<sup>31</sup>

In a very basic sense, according to Donald R. Peterson, forms of treatment, psychological, social, or sociological, are experimental procedures. This doesn't imply a loss of compassion or a lack of interest in human well-being. Rather it does imply

<sup>30</sup> Carl R. Rogers and B. F. Skinner, "Some Issues Concerning the Control of Human Behavior: A Symposium," in Control of Human Behavior, Vol. I, ed. by Roger Ulrich, Thomas Stachnik, and John Mabry (Glenview, Ill.: Scott, Foresman & Co., 1966), p. 308.

<sup>31</sup> Michael and Myerson, p. 23.

that treatment should be planned as carefully as available knowledge permits, that the treatment should be specified as clearly as possible, that any changes which come about should be faithfully recorded, that the information about functional relationships thus gained should be employed in a reformulated appraisal of the problem, and that revised treatment measures should then proceed in an indefinite cycle of diagnostic information and therapeutic action.<sup>32</sup>

If learning is defined broadly enough, behavior-therapy amounts to the modification of behavior by the application of learning principles. Donald Peterson claims that this makes therapy a psychoeducational task and it demands of assessment far more than a study of the individual, although the study of the study of sociological, social, and psychological problems.<sup>33</sup>

However, according to Hollis:

. . . . .the objectives of treatment may involve modification not only of the environment but also of the individual, for when one problem is of interpersonal adjustment environmental change alone is seldom the total answer. Almost always the major undertaking is some form of change in the person seeking help, as well as with others in his family who may also be interested in letter relationship.<sup>34</sup>

Thus, because of the school social worker's dual role of serving individuals while simultaneously by dealing with the sources of pupil difficulties within the school, his job will involve a great deal of work within two different environments - the school and the home.

<sup>32</sup>Donald R. Peterson, The Clinical Study of Social Behavior (New York: Appleton-Century-Crofts, 1968), p. 14.

<sup>33</sup>Ibid, p. 9.

<sup>34</sup>Hollis, p. 219.

According to Michael and Meyerson, the only channel open to counselors for influencing human behavior is through changes in the environment. The phenomenon with which counselors deal is behavior, and the independent variable which controls behavior must be the environment. A behavioral system attempts to specify, without reference to unobservable, hypothetical inner-determining agents, the conditions and the processes by which the environment controls human behavior. Behaviorally oriented counselors agree that telling people what is wrong and what they "should" do is an ineffective procedure. The heart of the behavioral approach in counseling is that the environment must be manipulated so as to allow strong reinforcing consequences to become attached to behavior that is desired.<sup>35</sup>

Many of the same behavioral principles can and should be applied to both of the environments (the school and the home) within which the school social worker functions. I think that perhaps one of the most effective and applicable of the behavioral techniques is positive reinforcement. Since positive reinforcers increase the probability that the behavior which preceded them will reoccur in the future, the social worker or teacher or parent can increase the probability of the occurrence of a particular behavior by positively reinforcing the desirable behavior. Although this can be accomplished through the use of token rewards (learned reinforcers which can be traded for

<sup>35</sup> Michael and Myerson, pp. 25, 42-53.

other reinforcers) such as points, candy, stars, grades, and special privileges, social reinforcement often assumes a powerful significance. The approval of others can have compelling importance as an incentive and as a positive reinforcer after the behavior has occurred.<sup>36</sup> Thus, simple praise can sometimes be quite effective as a positive reinforcer.

One of the most influential and misused social reinforcer is attention. In several studies which systematically examined the effects of adult attention on some problem behaviors of normal preschool children, the findings clearly indicated that adult attention was a strong positive reinforcer for these children. While it seems reasonable that adult attention may be a positive reinforcer for most young children, it is also conceivable that adult attention may be a negative reinforcer for some children.<sup>37</sup> Thus, in a treatment program designed to modify the behavior of a child, it is imperative to know the individual and what will serve as positive reinforcement for him.

Because it appears to me that adults are often more attentive to a child when he misbehaves or is engaging in undesirable behavior than when he is engaging in appropriate behavior, I contend that social attention is extremely misunderstood and misused by many adults who do not even realize that they are applying such behavioral modifiers and controls. After student teaching in a third grade classroom this preceding fall,

<sup>36</sup>Peterson, p. 73.

<sup>37</sup>Florence R. Harris, Montrose M. Wolf, and Donald M. Baer, "Effects of Adult Social Reinforcement on Child Behavior" in Control, Vol. I, ed. by Ulrich, Stachnik, and Mabry, p. 136.

many examples of the misuse of adult attention are vividly implanted in my memory. For example, which child usually receives more attention from the teacher, the child who is quietly engaged in his work or the student who is engaging in disruptive behaviors such as talking, throwing paper wads, or jumping out of his seat? Since the teacher's attention often takes the form of scolding, she may assume that she is punishing the child. In reality, however, the teacher's attention may be more rewarding than punishing to the child.

In my opinion, this is a crucial concept for teachers and parents to understand, and one which I regret that I was not aware of when I was student teaching. In looking back upon my student teaching experience, I realize how both my supervising teacher and I in many cases reinforced through the misuse of attention, the very behavior which we were attempting to eliminate. One boy, whom I will call T., at times deliberately engaged in behaviors which were disruptive to the class and aggravating to the teacher - talking to other children, refusing to do his academic work, pushing other children, "sassing" the teacher, and other similar behaviors. The most common methods which were used in an attempt to modify these undesirable behaviors were requesting or ordering him to cease the inappropriate behavior or requiring him to remain quietly in his seat during physical education or after school, neither of which was even moderately effective in modifying his behavior. According to behavioral theory, the most effective method of



modifying T's behavior would be to ignore his inappropriate behavior while simultaneously reinforcing any desirable behavior in which he engaged. In giving this case considerable thought, it is my personal opinion that the combination of these two behavioral techniques - ignoring undesirable behavior and reinforcing desirable behavior - would have been effective in modifying the behavior of T, as his behavior seems to have been a method of gaining the teacher's attention.

This case can also be related to the principle of extinction, which claims that when a reinforcing stimuli which maintains a particular behavior is withdrawn, that behavior is likely to decrease in frequency. Thus, in the case of T, if reinforcement for his inappropriate behaviors was withdrawn, the inappropriate behaviors would be likely to decrease in frequency.

According to Baer and Sherman, imitative behavior can be established and eliminated in young children through techniques of reinforcement and extinction. The reinforcement of one imitative behavior can be generalized to the imitation of other, different behaviors whose imitation is not directly reinforced.<sup>38</sup>

In some cases, however, positive reinforcement alone may not be sufficient to modify a person's behavior. It may then be necessary to implement the technique of punishment, which has been defined previously in this paper as a procedure which tends to weaken behavior by presenting an aversive stimulus

<sup>38</sup>Donald M. Baer and James A. Sherman, "Reinforcement Control of Generalized Imitation in Young Children," in Control, Vol. I, ed. by Ulrich, Stachnik, and Mabry, pp. 103-110.

contingent upon a response or removing a positive reinforcer contingent upon a response. This method of control is used frequently in both the school and in the home, as can be seen, for example, in the use of spanking by parents.

However, according to Nathan B. Miron, the most important aspect of almost all operant conditioning programs is the use of positive reinforcement, even when punishment happens to be a part of the individual program. Punishment can be used to decrease the occurrence of a behavior, but to build an appropriate behavior, positive reinforcement is necessary.<sup>39</sup>

Briefly, two other types of behavior controls are "arranging an opportunity for action" and the development of effective discriminative repertoires. B. F. Skinner claims that arranging an opportunity for action is another disguised form of control because "When we present a relevant state of affairs, we increase the likelihood that a given form of behavior will be emitted."<sup>40</sup> And according to Michael and Meyerson, the development of effective discriminative repertoires for interpersonal behavior also has great importance for those dealing with the practical control of behavior.<sup>41</sup>

Speaking of the aggressive aspects of personality, Hollis asserts that the first approach to modifying them, if

<sup>39</sup>Nathan B. Miron, "Issues and Implications of Operant Conditioning: The Primary Ethical Consideration," in Control, Vol. II. ed. by Ulrich Stachnik, and Mabry (Glenview, Ill: Scott, Foresman and Co., 1970), p. 350.

<sup>40</sup>B. F. Skinner, "Freedom and the Control of Men," in Control, Vol. I, p. 15.

<sup>41</sup>Michael and Meyerson, p. 27.

changes in them become the objective of treatment because they are causing dysfunction, is usually to demonstrate their harmful effects in actual life. Dependent traits can sometimes be modified by a period of gratification through sustaining and directive techniques followed by gradual practice in thinking through decisions and courses of behavior in the current situation.<sup>42</sup>

Michael and Myerson claim that:

The entire field of guidance, counseling, and psychotherapy might benefit considerably if all workers considered seriously just one behavioral principle and its corollary, namely, that behavior is controlled by its environmental consequences and that an effective procedure for producing behavioral change is the manipulation of the environment so as to create consequences that will produce desired behavior. If then, it was desired to create, maintain, strengthen, weaken, alter, or eliminate a particular behavior or set of behaviors, attention would be directed toward the operation of behavioral determiners outlined in the previous section. One advantage of this kind of formulation is that it is explicit, teachable, and testable. Another advantage is that it tells the counselor what has to be done and allows him to monitor progress within an objective rather than initiative framework.<sup>43</sup>

In attempting to decide what type of treatment should be implemented to deal with a behavior problem, Florence Hollis maintains that certain characteristics of a client's personality are of key significance in estimating which treatment approaches he will be most able to use. Six characteristics have shown themselves again and again to be of primary importance: anxiety, guilt, object relatedness, impulse control, repression, and certain qualities of thought process or intellect.<sup>44</sup>

<sup>42</sup>Hollis, p. 226.

<sup>43</sup>Michael and Meyerson, pp. 41-42.

<sup>44</sup>Hollis, p. 229.

As mentioned previously, the school social worker may become involved in both direct casework with children and indirect counseling with teachers. Because of the growing trend toward indirect, resource-type service to teachers and other school personnel and my feeling that this method is generally more effective in reaching a greater number of people, the emphasis in this paper will be on the latter type of service, to which the principles of behavior modification are particularly relevant and applicable. As stated by Roger Ulrich:

It is doubtful that we will ever completely solve behavior problems by dealing with them after they are well established. The solution will have to come through prevention, and we must look more diligently for ways to alter conditions which cause problems. The role . . . should become more and more that of providing help to classroom teachers whose correct application of known principles of behavior will help prevent future maladaptive behavior. We have far too long attacked behavior problems after they have been well established. We must begin to work with the very, very young and arrange environments which will increase the probability that behavior problems will not occur.<sup>45</sup>

How then can the social worker assist the teacher in the application of behavioral principles within the classroom? One important possibility, in my opinion, is to bring the concepts, theories, and ideas of behavior modification to the attention of teachers and to help them understand how their behavior influences their students and realize how they are continuously, consciously or not, attempting to modify and control the behavior of students. In addition, Charles H. Madsen, Wesley C. Becker, and Don R. Thomas claim that teachers with various "personalities"

<sup>45</sup>Roger Ulrich, Marshall Wolfe, Marland Bluhm, "Operant Conditioning in the Public Schools," in Control, Vol. II, p. 343.

and backgrounds can be trained systematically to control their own behavior in ways which will improve the behavior of the children they are teaching. However, teachers can also "create" problem behaviors in the classroom by controlling the ways in which they respond to their pupils. Why is it important for teachers to be able to improve the behavior of the children in their classes? Unless teachers are effective in getting children "ready to learn", their technical skills are likely to be wasted.<sup>46</sup>

A variety of approaches are being undertaken to resolve certain problems within the school system and to enhance educational attainments. These problems include the tendency of some youth to drop out of high school before graduation, underachievement and academic failure among pupils believed to be intellectually capable, and misconduct that disrupts classroom procedures and school discipline. According to Florence Hollis, these malperformance patterns should be viewed as resultants of the interaction of both pupil characteristics and school conditions. "Specific conditions of the school may interact with attributes of the student population to enhance or impede educational progress. Indeed, certain aspects of school organization and practice may contribute, inadvertently and unwittingly, to the very problems they are designed to alleviate."<sup>47</sup>

<sup>46</sup> Charles H. Madsen, Jr., Wesley C. Becker, and Don R. Thomas, "Rules, Praise, and Ignoring: Elements of Elementary Classroom Control," in Control, Vol. II, pp. 250-262.

<sup>47</sup> Hollis, pp. 350-351.

Several case studies have been conducted which illustrate how numerous principles of behavior modification can be effectively applied to a variety of social and academic problems arising within the school system.

It seems to me that the most effective and readily available technique for the control of human behavior is positive reinforcement. According to Baer and Wolf, the reinforcement contingency plays an exceedingly important role in both pre-school and public schools. In fact, they claim that if the reinforcement contingency does not operate, "education simply may not proceed."<sup>48</sup>

Two different types of reinforcement contingencies are readily available to teachers: social reinforcers, such as attention and praise, plus token reinforcers, such as grades, points, stars. Another type of reinforcement contingency which should be mentioned is primary reinforcers such as food, but this type of reinforcement is seldom available to a teacher within a regular classroom situation.

Baer and Wolf constructed an experimental design which was used throughout several studies to evaluate any reinforcing effect on child behavior that might inhere in the ordinary social responses of teachers to children. These social responses, which were all essentially attentive, were quite varied - they

<sup>48</sup> Donald M. Baer and Monroe M. Wolf, "The Reinforcement Contingency in Pre-school and Remedial Education," in Early Education, ed. by Robert. D. Hess and Roberta Myer Bear (Chicago, Illinois; Aldine Pub. Co., 1968), p. 119.

might consist simply of a glance or steady regard: or they might be more complex and include nods, smiles, and other facial expressions; or they might be quite complex and embody forms of attention that could be called approving, amused affectionate, disapproving, or angry. In order to evaluate the preceding social responses, 5 successive stages for this experiment were designated:

1. the baseline, which consisted of the observation of some behavior of a child and its social consequences from teachers. During this first stage Baer and Wolf found that often the teacher was reinforcing an undesirable behavior or extinguishing a desirable one through non-reinforcement.
2. teaching a changing pattern of responsiveness to the child's behavior. The most desirable form is a combination of reinforcement and extinction operating concurrently. Judgements of success or failure require a precise quantitative estimate of a child's behavior over a period of time.
3. return to the baseline.
4. reinstatement of experimental procedures which have proved effective during the second stage.
5. gradual transition from the reinforcement of every instance of the desired behavior to only occasional reinforcement.<sup>49</sup>

Several studies using attention, which is probably the most influential reinforcers for young children available to either teachers or parents, have been conducted within the school system to modify and control various behavioral problems.

<sup>49</sup>Baer and Wolf, p. 119.

One experiment which particularly illustrates the influence of attention on behavior is that which involved two emotionally disturbed boys whose classroom behavior was altered by arranging and manipulating the consequences of their behavior. Case I was an 11-year-old of normal intelligence and no organic disorder. Whenever he was asked to spell a word previously studied, he would mutter letters which were unrelated to the word. The experimenter (E) worked with the subject (S) on his undesirable behavior, but it only increased. Then E ignored the undesirable behavior and reinforced only desirable behavior - by smiling, chatting, and physical proximity. After a month had elapsed, the frequency of the bizarre spelling responses had declined to almost none per class session. The boy was also working more efficiently and making adequate academic progress at the end of this month.<sup>50</sup>

Case II was also an 11-year-old of normal intelligence and no organic disorders. The subject (S) emitted undesirable behavior, such as temper tantrums, baby talk, and irrelevant comments and questions, with high frequency. The experimenter (E) ignored the undesirable behavior and reinforced the desirable behavior by conversation with S, proximity, smiling, and activity which was appealing to S. The results of this experiment were

<sup>50</sup> Elaine H. Zimmerman and J. Zimmerman, "The Alteration of Behavior in a Special Classroom Situation," in Control, Vol. I, pp. 94,95, 131.



that the temper tantrums disappeared entirely and other undesirable behavior declined almost to the point of extinction. The boy also began working in class more efficiently and making good progress.<sup>51</sup>

Another case study which employed the attention of the teacher as a social reinforcer for desirable behavior was that of a three-year-old girl who had regressed to an excessive amount of crawling. Observations showed that more than 80% of the child's time was spent in off-feet positions. In addition, records showed that crawling behavior frequently drew the attention of teachers, while on-feet behaviors seldom drew such notice. Thus, the experimenters decided to institute a program in which the teachers no longer attended to the child whenever she was crawling or crouching but gave her continuous attention as long as she was engaging in behavior in which she was walking, standing, or running. Within a week, she had acquired a close-to-normal pattern of on-feet behavior.<sup>52</sup>

Two studies were also conducted with children who exhibited markedly solitary play behavior. Systematic observation revealed that isolated play usually attracted or maintained the attention of the teacher, whereas social play with other children did so comparatively seldom. A plan was initiated in which teachers were to attend to children regularly if they approached other children and interacted with them. On the other hand, teachers

<sup>51</sup>Ibid.

<sup>52</sup>Harris, Wolfe, and Baer, p. 131.

were not to attend to children so long as they engaged in solitary play. To begin with, attention was given when children merely stood nearby watching other children; then they received attention when they played beside another child; and finally, attention was given only when they interacted with other children. In both isolate cases this new routine for giving adult attention produced the desired result: isolated play declined markedly in strength while social play increased two- or threefold.<sup>53</sup>

A study was also conducted on a four-year-old boy who cried a great deal after mild frustrations. Baseline observations showed that this crying behavior consistently brought attention from teachers in the form of going to him and showing solicitous concern. During the following days this behavior was ignored by the teachers (unless the child was hurt), and ten days of ignoring outcries but giving attention for verbal and self-help behaviors produced a steady weakening of the crying response to nearly the zero level.<sup>54</sup>

Another case in which attention was applied as a reinforcer to modify behavior involved a boy noted for a lack of any sort of vigorous play activity. Teachers reported that they frequently attempted to encourage him through suggestions or invitations to engage in the more vigorous forms of play which were available. It was decided by the experimenters to select a particular form of active play to attempt to strengthen, and as a result, the

<sup>53</sup>Ibid. pp. 133-134.

<sup>54</sup>Ibid. p. 133.

climbing frame, a wooden form with ladders and platforms, was chosen. The teachers attended first to a child's proximately to the frame, then only touching it, climbing up a little, and finally extensive climbing.<sup>55</sup>

During the baseline less than 10% of the child's time was spent in any sort of climbing, but during the course of reinforcement for pleased adult attention for the climbing frame, this behavior greatly increased until it finally exceeded 50% of the child's morning. Following this, after, a reversal back to baseline conditions and then reinstatement of reinforcement for the climbing frame, the teachers began an intermittent program of reinforcement for climbing on any suitable objects as well as vigorous play of all parts, in an effort to generalize increased vigorous activity. As a result, frame climbing weakened considerably, being largely replaced by other climbing activities. Checks made in the following year in another play yard indicated that vigorous climbing had become a stable part of his behavior repertoire.<sup>56</sup>

Because each behavior problem is unique and the methods used to deal with it should thus be based upon the individual, it is not possible to list a step-by-step procedure of how principles of behavior modification can be applied within the classroom. However, preceding and subsequent examples of cases will hopefully help to familiarize the reader with ways in which principles of behavior modification can be effectively applied to behavior problems in the school system.

<sup>55</sup>Ibid, pp. 135-136.

<sup>56</sup>Ibid.

Praise, teacher attention, stars, and grades provide adequate incentive for most pupils to behave in a socially approved way. However, for some students - notably school dropouts, aggressive children, and some retarded children - these methods are relatively ineffective. Where the usual methods of social approval have failed, token reinforcement systems have proven effective. Token reinforcers are tangible objects or symbols which attain reinforcing power by being exchanged for a variety of other objects such as candy and trinkets which are back-up reinforcers. Tokens acquire generalized reinforcing properties when paired with many different reinforcers. The generalized reinforcer is especially efficient since it is effective regardless of the momentary condition of the organism.<sup>57</sup>

The fact that academic and social behaviors are operants, and hence sensitive to consequent stimulation, has led many teachers and researchers to use, indiscriminately, contrived contingencies such as tokens, candies, points, and stars. However, such artificial reinforcers are not always necessary, and in many instances in which they have been used, they have not been functional. In other words, a child's rate of learning has not increased through the use of candies or by whatever else he receives in exchange for a collection of tokens or a sum of points. Contrived reinforcers are appropriate only when the usual reinforcers applied in the classroom (confirmation,

<sup>57</sup>K. Daniel O'Leary and Wesley C. Becker, "Behavior Modification of an Adjustment Class: A Token Reinforcement Program," in Control, Vol. II, p. 182.

indications of progress, privileges, preferred work, approval, and the like) are not meaningful to a child. If, at times, contrived reinforcers are considered necessary in order to initiate learning, they can be scheduled so that they are gradually replaced by reinforcers indigenous to the situation and activity being learned. These are called by Ferster (1967) "natural", "intrinsic", or "automatic" reinforcers. As Skinner (1968) pointed out, "the critical task in most teaching is not the incorporation of more and more new reinforcers, but the effective utilization of those currently available to the teacher."<sup>58</sup>

A program using token reinforcement was conducted by K. Daniel, with 17 nine-year-old children described as emotionally disturbed; their undesirable classroom behavior included temper tantrums. For the children in this study, generalized reinforcers such as verbal responses and token reinforcers such as grades hadn't maintained appropriate behaviors. Thus, one purpose of this project was to devise a token reinforcement program which could be used by one teacher in an average classroom; another purpose was to determine whether the token system could be withdrawn gradually without an increase in disruptive behavior by transferring control to teacher attention, praise, and grades.<sup>59</sup>

After the baseline period, during which the class was conducted as usual, the experimenter (E) began a token reinforcement period by placing instructions on the board and then explaining

<sup>58</sup>Sidney W. Bijou, "What Psychology Has To Offer Education - Now," Journal of Applied Behavior Analysis, Vol. III, 1970, pp. 65-66.

<sup>59</sup>O'Leary and Becker, pp. 182-187.

the token procedure to the children. Tokens consisted of ratings placed in booklets on each child's desk. The children were told that they would receive ratings from one to ten which would reflect the extent to which they followed instructions and that they would also receive group points. These points or ratings, which would be placed in their booklets by the teacher, could be exchanged for a variety of back-up reinforcers consisting of small prizes. However, in addition to token reinforcement, the teacher was instructed to make positive comments (a form of social reinforcement) when appropriate and to ignore the deviant behavior of a child while, at the same time, reinforcing the appropriate behavior of another child.<sup>60</sup>

The results showed that the deviant behavior decreased from 80% to less than 50% by the end of the year. According to O'Leary and Becker,

Anecdotal records indicate that after the token procedure was put into effect, the children behaved better during the morning session, music, and library periods. These reports suggest that a transfer to normal classroom control using social reinforcement and grades would not be very difficult.<sup>61</sup>

Several rules should be kept in mind when planning a token system:

1. Start with tokens which can be quickly and easily given.
2. A variety of payoffs increases the chances one will have a reinforcer for most children.
3. Reinforce a lot in the beginning and less as the behavior improves.

<sup>60</sup> Ibid.

<sup>61</sup> Ibid.

4. To get off the system, so it won't be needed forever, one should pair the tokens with praise and affection.<sup>62</sup>

According to J. Grayson Osborne, recent studies have indicated that the classroom behavior of humans can be successfully manipulated given the proper application of controlling environmental contingencies. Homme and his associates reported that preschool nursery children would engage in the low probability behaviors of sitting quietly and looking at the blackboard if these behaviors were intermittently followed by the opportunity to engage in higher probability behavior such as running or shouting, which is called Premack's principle. Becker and his associates have also shown that disruptive behavior in the classroom can be manipulated as a function of the teacher's behavior. They have further suggested that one important classroom management device is the use of approval for appropriate behavior. However, the usefulness of the token economy has also been proven in the classroom. Wolf, Giles, and Hall (1968) demonstrated that overall gains could be nearly doubled in the remedial classroom using a token reinforcement system over what was achieved in the regular classroom without the token system. Although studies utilizing token economy have demonstrated the token's usefulness in education, in many cases the cost of providing back-up reinforcers is outside the financial ability

<sup>62</sup>Wesley C. Becker, *Parents Are Teachers* (Champaign, Ill: Research Press Company, 1971), p. 49.

of most institutions. In addition, most school administrations have strong negative feelings about paying their students for learning.<sup>63</sup>

However, the classroom management techniques propounded by Homme and Becker indicate that much behavior can be modified in the classroom without the necessity of the token economy and its costs. The following study illustrates a behavioral management technique that can be used to control behavior in the classroom with no financial cost to the institution involved. In this study, which dealt with six girls ranging from 11 years, 8 months to 13 years, 8 months, the teacher was experiencing problems in maintaining the attention of the studies. She began the experiment at 8:05 a.m. by telling the class that she wanted them to remain in their seats until 8:20, at which time they would be given 5 minutes of their own time if they had remained in their seats; however, if they had left their seats during this time they lost their free time. The length of the work periods was gradually increased and a point system for the completion of academic work was added, by which a student could earn check marks and gummed stars on a chart. As a result of this program, a sharp decrease in out-of-seat behavior occurred. The amount of in-seat behavior was thus increased by making time away from schoolwork contingent on remaining seated for specified periods of time.<sup>64</sup>

<sup>63</sup>J. Grayson Osborne, "Free Time as a Reinforcer in The Management of Classroom Behavior," in Control, Vol. II, pp. 189-194

<sup>64</sup>Ibid.



The successful application of reinforcement principles to modify the academic and social behavior of children in the classroom has been demonstrated in a number of recent studies. In the studies to date the reinforcement has been dispensed during or immediately after the response. However, in a classroom, immediate reinforcement is not always practical. The following experiment was designed to determine whether delayed reinforcement techniques could be used to modify the deviant behaviors of a maladjusted child in a regular classroom. It was hoped that the social and academic behaviors of the subject, who was a 12-year-old sixth grade girl named Karen, could be modified so that she would be able to function more appropriately in her environment.<sup>65</sup>

In this experiment three behaviors were selected to attempt to modify. During the first phase, which was designed to modify face-touching behavior, Karen was given a stopwatch and instructed to observe her own behavior which had been filmed and was shown on television. She was instructed to turn on the stopwatch whenever she was not touching her face but reset it to zero when she saw herself touching her face. On the first day she was given a poker chip each time she accumulated 15 consecutive seconds without touching her face. During the following three days, the length of time of not touching her face which was required for a poker chip was increased. Similar

<sup>65</sup>Michael L. Schwarz and Robert P. Hawkins, "Application of Delayed Conditioning Procedures to the Behavior Problems of an Elementary School Child," in Control, Vol. II, pp. 271-283.

procedures were used during phase two in order to modify posture and during phase three to modify voice volume.<sup>66</sup>

In regard to results, there was a dramatic decrease in face-touching, an immediate improvement in posture, and a general increase in voice loudness. Follow-up studies indicate that these improved behaviors were maintained over a period of time. According to Schwarz and Hawkins,

The results of this study suggest that delayed reinforcement techniques can be devised which are capable of modifying maladaptive behaviors in school-age children. Not only were the techniques employed in the present study effective, but their effect was rapid, generalized beyond the portion of the day which was used for training, and appeared to be lasting.

This study has shown that delayed reinforcement procedures can succeed in a practical classroom situation.<sup>67</sup>

In spite of the proven effectiveness of positive reinforcement in modifying behavior, however, according to B. F. Skinner, ". . . although we boast that the birch rod has been abandoned, most school children are still under aversive control - not because punishment is more effective in the long run, but because it yields immediate results."<sup>68</sup>

Not only positive but also negative reinforcement, withdrawal of positive reinforcement, can be utilized to modify behavior. On the subsequent study, the modifying procedures were designed so that a single teacher could collect all the relevant data and implement procedures without adding an

<sup>66</sup>Ibid.

<sup>67</sup>Ibid.

<sup>68</sup>B. F. Skinner, "The Design of Cultures," in Control, Vol. I, p. 336.

additional burden to her time and with minimal alteration of the daily classroom routine. The subjects of the study were 14 mentally retarded children ranging from 6 years, 7 months, to 10 years, 5 months, and the behavior causing concern was the "naughty finger," which included verbal reference to it, and tattling when a child used it. This behavior was modified by mounting a bracket in front of the room, similar to that found on daily desk calendars, holding 10 cards numbered one through 10. The children were told that there would be a special 10-minute recess at the end of the day, unless the teacher saw the naughty finger or heard about it in which case she would flip down one of the cards and the class would have one minute less of recess whenever it happened. This procedure resulted in an immediate deceleration of the undesirable behaviors under modifying procedures and a subsequent gradual rise when the contingency was removed. In addition to strongly affecting classroom behavior, this procedure required no extra equipment or money, a minimal alteration of classroom routine, and very little investment of teacher time.<sup>69</sup>

Although most of the cases previously mentioned dealt with social problems of the children, academic problems can also be modified through principles of behavioral control. According to Lundberg Fox, the issue of efficient education pivots on the study behavior of the student. The importance of study habits extends beyond the formalities of the subject

<sup>69</sup>I. Sulzbacher and Joyce E. Houser, "A Tactic to Eliminate Disruptive Behaviors in the Classroom: Group Contingent Consequences," in Control, Vol. II, pp. 187-189.

matter education, as the products of poor study habits are both the cause and consequence of much of what is called "personal maladjustment." The problem is a frequent occasion for visits of students to counseling centers." That the consequences of poor study habits are fundamental expressions of repeated failure should give pause to those who would discount the problem as simply a manifestation of some more basic disorder. Four years of nagging anxiety combined with either failure or compensating behaviors of cheating, meaningless memorizing (cramming), and disguising ignorance, must have their effect. The problem may have far more relevance to what is called mental hygiene than is commonly believed."<sup>70</sup>

He continues by claiming that a student's actual study behavior consists largely of acts indirectly relevant to, and even competitive with learning. Thus, the first problem facing teachers is how to provide the conditions that will place the imitation of study by students under effective stimulus control. If this first step is missing, all other developments will come to nothing. In order to accomplish this, certain procedures or conditions are necessary: placing the initiation of study under stimulus control, making study occasion an effective stimulus for behaviors similar to what counselors call good study habits, and making it possible to accomplish this at a reasonable cost while using few professionals and reaching many students.<sup>71</sup>

<sup>70</sup> Lundberg Fox, "Effecting the Use of Efficient Study Habits," in Control, Vol. I, p. 86.

<sup>71</sup> Ibid. pp. 86-87.

The act of studying, regardless of efficiency, is not usually under adequate stimulus control, either by time or by place. The student may study at random occasions and at any place he may happen to be on those occasions. Thus he is subject to all the interfering behaviors conditioned to those occasions and no one occasion becomes uniquely related to study. Even where the student has established regular places and times for study, the immediately preceding occasion is likely to produce behavior competing with that of going to the place of study. A pilot study attempting to apply reinforcing principles to these problems has been conducted, which was sufficiently successful to justify its serving as a point of departure, at least a beginning which can be experimentally modified. In this pilot attempt, volunteers were sought, five of whom were chosen from among freshman and sophomore college students and were told that the experimenter believed that he had a method that would require study only in the day time and would lead to an improvement in grades.<sup>72</sup>

On the first day of counseling, a student who had a free period at 10 o'clock was told that he should begin building his study regimen by going to the library every day at that time. He was instructed to leave all books except physics on the first floor of the library and to go to a specified room to study physics. If he experienced discomfort or began to daydream, he was supposed to read one page of the text carefully or solve

<sup>72</sup> Ibid.

the easiest problem assigned to him and then leave the library immediately. However, each day thereafter the student was instructed to increase the amount of work performed after deciding to leave the study room. When this regimen of studying physics was established, the experimenter began scheduling additional courses, designating different rooms and times. Each of these steps was suggested by simple behavioral principles: making maximal use of available reinforcers, using the principle of successive approximation by requiring the mastery of only a small part of the program of study before proceeding, and using knowledge of reinforcing schedules by breaking study assignments into small parts.<sup>73</sup>

In an exploratory attempt to establish effective study techniques in the five students, two above and three below average, the method of successive approximation was used, just as it had been in establishing the behavior of spending time in the study room. Four different steps were involved in the successive approximation: "survey", which involved reading over the bold face and italicized headings in the chapter and giving an overall picture of the material to be studied; "question", which meant going over the material a second time and formulating questions suggested by the headings; "reading", which referred to reading without underlining or notetaking; and "recitation", which encompassed outlining or otherwise reciting material while the book was closed. Only after attendance in the study room was well established did the experimenter (E) instruct the

<sup>73</sup>Ibid, p. 87.

student to begin with "survey". In the first session, E explained how and why the survey was to be done, while in the second session E had the student describe how he surveyed the material and then corrected him where he used the method incorrectly. When "survey" became routine, the student was instructed to begin the "questioning" phase, and after this was well established, analysis of the student's reading habits was begun. He was instructed to stop all underlining and note-taking and to read only to answer the questions he had previously asked or those that occurred to him as he read. During this period the experimenter also began to develop "recitation", by having the student stop at the end of each section, close his book and sit on it, and spend no more than three minutes outlining what he read. Throughout the entire procedure the student was on a schedule in which he made an independent decision after each study to stay and study or leave and play.<sup>74</sup>

In regard to the results of the program, Fox says that:

The results of our pilot study were promising. Each of the five students remained with us for the college quarter. During the second semester they reported the continued use of the method, and all demonstrated significant improvement in grades. . . four of the students now accomplished all their study in the day, and had evenings and weekends free. One required two hours on Saturday morning to complete his work.<sup>75</sup>

Behavior modification is not only possible in individual casework, but it can also be utilized in group casework. In one study reported upon by Hollis, involving five public school systems, pupils were identified and referred for underachieving

<sup>74</sup>Ibid., pp. 88-89.

<sup>75</sup>Ibid.

or disruptive behavior and detailed information was collected about each one. The referred pupils were carefully matched in pairs with respect to several characteristics and one of each pair was then randomly assigned to the service groups while the other became the control who received whatever attention was customary within the school except group service. At the same time, another sample was randomly selected from the rest of the student population. Each prospective member of a group was interviewed by a social worker to review school difficulties, explain why he was selected and what would happen in the group, and to establish initial contact for work together on his specific problems. Under the guidance of professional workers, group sessions, which were the primary means by which change was attempted, were conducted regularly during school hours and in school buildings. Within these group sessions there was explicit public recognition of each pupil's school difficulties and mutual assistance in resolving these. Group sessions and activities focused on actual problems manifested in the school and emphasis was placed on mobilizing the pupil to desire to change toward improved achievement and appropriate conduct. In order to increase the effectiveness of these group sessions, pupils were helped to develop new skills and alternative methods for coping more effectively with certain stressful school experience. The primary targets of change through this group work approach were: pupil values and goals, self-images, motivations and expectations, social interaction skills, and specific academic abilities.<sup>76</sup>

<sup>76</sup>Hollis, pp. 352-355.



Several sets of before - and after- measures were used in the study: school grades, attendance records, and similar official school information; a behavior rating form, completed by teachers and other school personnel during the early school year and at the end, on the pupils in all samples; questionnaires completed by the pupils plus interviews with them with respect to attitudes, self-images, commitment to educational objectives, school experiences, and peer relations. These before - and after - measures were the primary means of evaluating changes effected by group services. The means for assessing the processes of change were: systematic review of practitioners, reports and service records, independent reviewing of treatment groups, and direct consultation with service personnel.<sup>77</sup>

A special advantage of working with pupils in groups is that powerful forces of peer pressure and judgement can be harnessed in the service of desired change, rather than covertly supporting deviance. In addition to working with individuals in groups, however, group workers also maintained frequent contact with classroom teachers, advisers and counselors, and administrative personnel. Much of the practitioner's efforts through these contacts were to modify perceptions and practices toward malperforming pupils, who lacked effective work and study habits, felt rejected by the school, were doubtful about the future, and were pessimistic about the chances to achieve, on the part of the school personnel.<sup>78</sup>

<sup>77</sup>Ibid.

<sup>78</sup>Ibid.

One case study which discusses and compares reinforcement with two other methods which can be used by teachers in order to control behavior in the classroom was conducted by Madsen, Becker, and Thomas. In this study volunteers were recruited from public elementary schools. After consultation with the teachers plus observations of the classroom, two children with high frequency problem behavior were selected for study in each class and baseline records were taken to determine the frequency of the problem behaviors. At the end of the baseline, the teachers entered a workshop on applications of behavior principles in the classroom, which provided them with the rationale and principles behind the procedures being introduced in their classes. Various experimental procedures were then introduced one at a time and the effects on the target child's behavior were observed. The first of these experimental procedures which was introduced was "rules", in which the teacher was to specify to the children in her class explicit rules of classroom conduct, while the second experimental procedure was the ignoring of inappropriate behavior, and the final procedure was praise for appropriate behavior. Ratings of teacher behavior were also obtained by the experimenters in order to clarify the relationships between changes in teacher behavior and in child behavior and to help teachers learn the contingent use of approval and disapproval. The results of these three procedures indicated that rules alone had little effect in improving classroom behavior, that the combination of ignoring and praise was very effective in achieving better classroom behavior, and that praise for appropriate

behavior was probably the key teacher behavior in achieving better classroom management.<sup>79</sup>

Having the teacher follow a combination of the following three procedures has proven quite effective in modifying behavior in some classes:

1. Clear signals.
2. Ignore disruptive behavior.
3. Praise the children for improvement in behavior.

In fact, in an uncontrolled classroom of first graders, the implementation of the preceding three procedures resulted in the classroom becoming quieter and members learning to work for longer periods of time - order and cooperation.<sup>80</sup>

Although teacher reinforcement can be extremely effective in modifying the behaviors of students, the teacher must also seek allied agents for the reinforcement of newly established behaviors so that the child is not entirely dependent upon the teacher's reinforcement.<sup>81</sup> In the typical school setting an abundant resource available for the modification of student behavior is other students. One study in which the student modifier was used was conducted by Paul R. Surratt, Roger Ulrich, and Robert P. Hawkins. This study investigated the behaviors of four first grade students, who had been described by the teacher as students who not only didn't complete work assignments during study times but also engaged in incompatible behaviors, in response to controls exerted by a fifth grader

<sup>79</sup> Madsen, Becker, and Thomas, pp. 251-260.

<sup>80</sup> Becker, p. 13.

<sup>81</sup> Baer and Wolf, pp. 124-125.

functioning as a student engineer. A console designed and constructed to record the behaviors in question and give feedback to the subjects as to whether they were meeting the criterion for those behaviors was operated by the fifth grader. Response contingent lights connected with the console combined with special privileges for studying a "great deal" served to increase working behavior. The teacher reported that the four children completed a greater number of problems and that a higher proportion of the problems completed were correct during the phases of the study when "working" behaviors were reinforced than during other phases; in addition, these gains were at least partially maintained following the termination of the study. According to data collected by television in the postcheck, three of the four children showed better performance six months after the experiment than during the baseline, suggesting that the brief application of special reinforcement contingencies during the experiment produced lasting improvement in working behaviors.<sup>82</sup>

In summarizing the use of other students as reinforcers, Surratt, Ulrich and Hawkins conclude:

In general it appears that the technique used in the present experiment has considerable promise for helping some children in school settings. It is capable of modifying the behavior of several children at a time and yet involves very little professional time. In fact, it should tend to release the teacher from some of the time she spends attempting to stop disruptive behavior and should accelerate more adaptive behaviors. Techniques based on this one should be useful to teachers, principals, school psychologists, school social workers, and others faced with the problem of helping children to

<sup>82</sup>Paul R. Surratt, Roger Ulrich, and Robert P. Hawkins, "An Elementary Student As a Behavioral Engineer," in Control, Vol. II, pp. 263-71.

more consistently exhibit more adaptive classroom behavior.<sup>83</sup>

In summation of the potential within the school system of this important principle of reinforcement, Baer and Wolf express my opinion when they claim:

In conclusion, the reinforcement contingency is central to education. In preschool settings, a social contingency can hardly fail to operate; its mechanics should be recognized, analysed, and used. In the public schools, some children may not respond to social contingencies. If education is to take place, a stimulus should be found for that contingency which does indeed function as a reinforcer; if that stimulus cannot be a social one, then a more tangible substitute. . . can be found.<sup>84</sup>

Although many of the problems which are brought to the attention of the school social worker are due to a child's malfunctioning within the classroom, the conscientious social worker will become involved with the home environment, in addition to the school environment. Much of a child's deviant behavior is traceable to practices of his parents, who unwittingly provide reinforcement that maintains the behavior. Parents may unknowingly be caught in the trap of reinforcing undesirable behavior by giving the child attention when he engages in the undesirable behavior. For instance, in the case of Peter, a 4-year-old boy who was very demanding and difficult to control, Peter received most of his attention from his mother when he misbehaved; very likely Peter's mother taught him to misbehave.<sup>85</sup> Thus, in the opinion of Robert G. Wahler, Gary H. Winkel, and Robert F. Petersen, parents may serve entirely as the remediators of the child's

<sup>83</sup> Ibid.

<sup>84</sup> Baer and Wolf, p. 129.

<sup>85</sup> Becker, p. 13.

behavior, once the modification of their own behavior has been made.<sup>86</sup> And, according to Todd Risley, it would be better, in the long run, to modify the home environment of a child than to try to make up for its deficiencies in a supplementary program.<sup>87</sup>

In recognition of the important part parents play in the behavioral (or personality) development of the child, various agencies dealing with child behavior problems have often utilized techniques whose goal is to modify parent-child relationships.<sup>88</sup> In order for the school social worker to stimulate a parent's modification of his own behavior, it is first essential that the parent be taught or informed about behavior principles so that he will understand how his behavior affects the behavior of his child.

First of all, a child acts the way he does because he was taught to behave that way, not because he was born that way. This does not mean that a parent deliberately tried to teach a child to be bad, but many of the things parents say and do have unexpected results; even the most well-meaning parent can teach a child to misbehave. One of the most important factors involved in this type of learning is positive reinforcement, which includes both social reinforcement, such as smiling and praise and attention, and non-social reinforcers, such as food and money and candy and toys. Behavior that is followed by a positive reinforcer

<sup>86</sup>Robert G. Wahler, et.al., "Mothers as Behavior Therapists for Their Own Children," Child Development: Readings in Experimental Analysis, p. 240.

<sup>87</sup>. Todd Risley, "Learning and Lollipops," Psychology Today, Vol. I, No. 8, January, 1968, p. 64.

<sup>88</sup>Robert P. Hawkins, et.al., "Behavior Therapy in the Home: Amelioration of Problem Parent-Child Relations With the Parent in a Therapeutic Role," in Control, Vol. II, p. 232.

will occur more frequently in the future and thus it will be strengthened. On the other hand, if a child responds and reinforcement does not occur, the behavior will be weakened. To be effective, reinforcements should also be given immediately after the behavior occurs and they should be given for the small steps along the way to whatever goal has been established.<sup>89</sup>

As most parents know, punishment is another way of weakening behavior. However, punishment is usually only effective for a short time, in addition to getting both the parent and child upset, and thus, it is not generally considered an effective way to train children.<sup>90</sup> There may be problem behaviors where the use of punishment is the most humane treatment which can be used, but care must be taken to ensure its effectiveness and to minimize the development of avoidance behaviors. Because the person punished may learn to avoid and escape from the punisher, this is not usually a preferred method. In fact, punishment should be avoided whenever possible, since problems can be created when it is used in the wrong way.<sup>91</sup>

From observations made in homes and classrooms, it seems that quite often parents accidentally reinforce their children for undesirable behavior. In fact, parents sometimes strengthen behaviors which they consider undesirable and weaken behaviors

<sup>89</sup>Gerald R. Patterson and M. Elizabeth Gullion, Living With Children (Champaign, Ill.: Research Press, 1968), pp. 1,3,4-26.

<sup>90</sup>Ibid, p. 13.

<sup>91</sup>Becker, p. 133.

which they consider desirable, as, for example, when an infant cries and is picked up by his mother.

Attention, praise, and general encouragement are effective rewards in the home. Of these, attention often has the greatest influence on a child's behavior. Because attention is so influential, a parent must be on guard against supporting bad behavior by paying attention to it.<sup>92</sup> As stated by Carl Williams:

If the specific acts of "frustration" behavior (for example, yelling, screaming, and kicking) are given reinforcement by adult attention, such behaviors could be strengthened and become part of a child's operant repertoire. These "spoiled" forms of behavior are distasteful to a parent; even so, they are frequently reinforced, because "giving-in" stops the distasteful behavior - temporarily.<sup>93</sup>

One experiment in which an attempt was made to modify deviant behavior by producing specific changes in the behaviors of mothers was conducted by Robert Wahler, Gary Winkel, Robert Peterson and Delmon Morrison. It was demonstrated in this study that a mother's social behavior may function as a powerful class of reinforcers for her child's deviant as well as normal behavior. In addition, it was also demonstrated that a mother's reactions to a child's behavior may be systematically modified, at least within the confines of an experimental setting, and these modifications may produce marked changes in her child's deviant behavior<sup>94</sup>

<sup>92</sup>Roger W. McIntire, "Spare the Rod, Use Behavior Mod," Psychology Today, Vol. IV, No. 7, December 1970, pp. 44-67.

<sup>93</sup>Carl D. Williams, "The Elimination of Tantrum Behavior by Extinction Procedures," Child Development: Readings, pp. 142-143.

<sup>94</sup>Wahler, et.al., pp. 241-252.



This experiment included three boys ranging from four to six years plus their mothers. The first case was Danny, a six year old who attempted to force his parents to comply with his wishes. Following the baseline, his mother was instructed to be responsive to cooperative behavior but to completely ignore command behavior, and the result was that Danny's rate of commanding behavior dropped considerably compared to the baseline, while cooperative behavior increased sharply. A four year-old boy named Johnny, who exhibited extremely dependent behavior and was sometimes aggressive when peers and teachers were inattentive to him, was the second case. After the baseline, his mother was instructed to ignore dependency behavior and to respond approvingly to independent behavior, which caused a drop in dependent behavior and an increase in independent behavior. In the third case, a 4-year-old boy named Eddie exhibited behaviors of "extreme stubbornness" - ignoring his mother's commands and requests or doing the opposite of what he was asked or told to do. After the baseline, his mother was instructed to ignore his oppositional behavior and to respond enthusiastically to his cooperative behavior. However, in this particular case, the desirable cooperative behavior did not increase, so a punishment procedure was combined with differential reinforcement - Eddie was isolated in a room following any oppositional responses. As a result, his oppositional behavior declined sharply and cooperative behavior increased markedly. The aim for all three cases was to train

the mothers to weaken deviant behaviors through a combination of extinction and the reinforcement of behavior which would compete with the deviant behavior.<sup>95</sup>

Another study, which was conducted by Robert Hawkins, Robert Peterson, Edda Schweid, and Sidney Bijou was an investigation of the feasibility of treatment in the natural setting where the child's behavior problem appeared - the home. The mother served as the therapeutic agent and received explicit instructions on when and how to interact with the child, a four-year-old boy named Peter S., who was brought to the clinic because he was extremely difficult to manage and control. His mother stated that she was helpless in dealing with his frequent tantrums and disobedience, which included kicking objects or people, removing or tearing clothing, calling people names, annoying his younger sister, making threats, hitting himself, becoming very angry at the slightest frustration, and demanding constant attention from yet seldomly cooperating with his mother.<sup>96</sup>

While observing the mother and child in the home, the experimenters noted that many of Peter's undesirable behaviors appeared to be maintained by attention from his mother. When Peter behaved objectionably, she would often try to explain why he shouldn't act thus or try to interest him in some new activity. Occasionally she would punish him by withdrawal of the abused toy or other object, but Peter was often able to persuade his mother to return the item almost immediately. He was also

<sup>95</sup>Ibid.

<sup>96</sup>Ibid.

punished by being placed on a high-chair and forced to remain there for short periods of time, but considerable tantrum behavior usually followed such disciplinary measures and was quite effective in maintaining the mother's attention.<sup>97</sup>

The treatment plan for Peter was divided into five stages, the first stage being simply the baseline. The second stage was an experimental one in which Mrs. S. was informed of nine objectionable behaviors which would be treated and was shown three gestural signals to be made by the experimenters to indicate how she was to behave toward Peter: signal A was to tell Peter to stop the behavior; signal B was to place him in a room and lock it; and signal C was to give him attention, praise, and affectionate physical contact. The third phase of the experiment was a return to baseline conditions, while the fourth stage was a second experimental phase which was the same as the first one except that special attention for desirable play was excluded. The final stage was the follow-up; for 24 days after the second experimental period there was no contact between the experimenters and the S family and Mrs. S. was given complete freedom to use any techniques with Peter that she felt were warranted. After this, a three-session posttreatment check was made to determine whether improvement was still evident.<sup>98</sup>

The result of this study was a sharp decrease in undesirable behavior during the experimental periods, which was being

<sup>97</sup>Ibid., p. 233.

<sup>98</sup>Ibid.

maintained at the time of the follow-up. Mrs. S. reported that Peter was well behaved and much less demanding. Hawkins, Peterson, Schweid, and Bijou conclude by saying that

The results of this study show that it is possible to treat behavior problems in the home, with the parent as the therapeutic agent. Home treatment may, in some cases, be more effective than treatment in the clinic, particularly when the undesirable responses have a low probability of occurrence in settings other than the home. Since it is widely held that many of a child's problems originate in the home environment, direct modification of this environment (including the behavior of other family members) may arrest the difficulty at its source. One limitation of this type of study, however, is the requirement of a cooperating parent. If this requirement can be met, the use of the parent as therapist can not only free the professional for other duties, but the parent, in learning to use techniques of behavior control, may become generally more skillful in dealing with the responses of the developing child and more capable in handling any future difficulties that may occur.<sup>99</sup>

In attempting to train mothers to modify the behavior of their own children, several experiments have also been conducted in which a combination of positive reinforcement of desirable behavior and ignoring undesirable behavior have been implemented. One of these involved an 8½ year old boy named Jeff, who had been referred to the outpatient psychiatric clinic because he had frequent temper tantrums and physically attacked his mother, teacher, and peers. In the treatment plan, the first step was to teach Jeff's mother to reduce her verbal output and to selectively ignore all of Jeff's abusive behavior; the second step was to establish certain material behaviors as conditioned

<sup>99</sup> Ibid, pp. 235-237.

negative reinforcers by associating them with physical punishment; and the final step was to have Jeff's mother identify acceptable behaviors as they occurred, positively reinforce them by responding warmly and praising him, and specify to Jeff which of his behaviors were acceptable. The results were a sharp reduction in general abuse, the mother's increased success in controlling Jeff, her increase in assertiveness and self-esteem, and mother and son began to express affection.<sup>100</sup>

Doug T., an 18-year-old who couldn't get to sleep and would go to his mother's bedroom 25 or 30 times during the night to tell her his worries, was another case in which both ignoring undesirable behavior and reinforcing desirable behavior were utilized. Mrs. T. would reassure Doug when he came to her with his worries, and his behavior thus persisted for three reasons: his mother's attention and sympathy served as a reward, this rewarding attention was given for poor behavior, and the behavior itself was easy. To change his behavior it was therefore necessary to give rewards at a more appropriate time and for better behavior and to make poor behavior more difficult to perform. Consequently, Mrs. T. was told not to listen to Doug's worries after bedtime. Instead, she was to set a special time early each evening to talk to Doug in the living room for 30 minutes. If Doug visited her bedroom after their discussion, she was to cancel the next evening's talk in the living room.

<sup>100</sup> Martha E. Bernal et.al., "Behavior Modification and the Brat Syndrome", in Control, Vol. II, pp. 161-70.

Doug was also instructed to keep a record of his visits and to log every worry.<sup>101</sup>

During the first week, Doug visited his mothers bedroom twice, the second week only once, and after that the bedroom visits ceased. By the third week the living room sessions were lasting only fifteen minutes and before the seventh week, Doug discontinued them. His worries also dropped off dramatically and within three weeks the number of items recorded in his dairy dropped to almost none. For Doug the crucial procedure was to stop the bestowal of a subtle reward - his mother's concern and attention - for a bad or undesirable behavior. Doug had to test the new rules, but when the consequences were as consistent as he was he was told they would be, his behavior changed.<sup>102</sup>

The removal of reinforcement can also be effectively used to modify behavior, and it was successfully used to treat a 21-month-old male child who exhibited tyrant-like tantrum behavior. The child had been seriously ill during the preceding 18 months, and consequently had received special care and attention from his parents when he demanded it. He enforced some of his wishes, especially at bedtime, by unleashing tantrum behavior to control the actions of his parents. This tantrum behavior was tolerated and even reinforced by the parents while the child was in poor health, but when the child returned to good health, the parents sought help in order to eliminate this

<sup>101</sup> McIntire, pp. 42-43.

<sup>102</sup> Ibid.

undesirable behavior. This problem was treated by removing the reinforcement for the tantrum behavior, the parents placed the child in bed and then left the room and didn't return when the child screamed and raged. By the 10th occasion, the child no longer whimpered or cried when his parents left the room. In addition, no unfortunate side effects or after effects arose; at the age of 3 3/4 years, the child appeared to be friendly, expressive, and outgoing.<sup>103</sup>

Rather than altering the deviant behavior and then determining the effect of this change upon reinforcing schedules of relevant social agents, it seems more reasonable, in the opinion of Gerald Patterson, Shirley McNeal, and Richard Phelps, to design intervention procedures which operate directly upon the social agents. Consequently, they conducted an intervention approach experiment in which the experimenter altered the reinforcing contingencies being provided by the parents, who then changed the behavior of their own children.<sup>104</sup>

The subject of this study was a five-year-old boy named Earl who was withdrawn, isolated, nonresponsive to contact initiated by his parents, and sporadically engaged in bizarre emotional outbursts and such atavistic behavior as eating feces. Over a four-week period, conditioning procedures were introduced to re-programme parents and children so that they would become mutually reinforcing, and programmes were also designed for use

<sup>103</sup>Williams, pp. 143-145.

<sup>104</sup>Gerald R. Patterson, et. al., "Programming the Social Environment", in Control, Vol. II, pp. 238-247.

by parents in changing the frequency of his isolated and negativistic behavior. A series of conditioning programmes was designed, each program being directed toward a different class of deviant behavior. Because it seemed necessary to change several aspects of Earl's social system simultaneously, these initial programmes were designed to fulfill four functions:

1. to train Earl's mother to use positive reinforcers.
2. to train her to initiate more social contacts.
3. at the same time to train Earl to function as a more effective social reinforcer for the behavior of the parent.
4. to initiate more social contacts to his parents.

Later in the series, programmes were also introduced for shaping Earl to more cooperative behavior and increasing the amount of time spent in social settings.<sup>105</sup>

The first set of contingencies involved training Earl to attend to the experimenter rather than gazing around the room by sounding a buzzer and giving him an M & M on each occasion that he looked at the experimenter. The experimenter then worked on eliciting a smile from Earl, and when this behavior was established with some regularity, the procedure was turned over to the mother. The next procedure was to facilitate the generalization of change in the patient's behavior from training sessions to occasions in which experimenters were not present by having the parents practice dispensing social reinforcement contingent upon Earl's adaptive social behaviors. The parents were

<sup>105</sup>Ibid.



reinforced for practicing social reinforcement by subtracting from their clinic fee one dollar for each note which they wrote describing an adaptive behavior and the social reinforcers.<sup>106</sup>

The results of this program indicated a substantial increase in the duration of interaction, rate of verbal interaction, occurrence of "warm" consequences by both parent and child, considerably less negative set in interaction with his mother, and increased responsiveness to modelling and social reinforcing behaviors of his mother. A follow-up conducted a year subsequent to the experiment revealed that Earl was well accepted by his peers and had acquired the necessary repertoire of academic behavior.<sup>107</sup>

Another type of behavioral procedure which can be implemented by parents to modify the behavior of their children is to require a less preferred activity to come before a more preferred activity as mentioned previously in this paper, in more technical terms this is called Premack's principle, which states that if behavior B is of higher probability than behavior A, then behavior A can be made more probable by making behavior B contingent upon it. As an example of this, note the case of Justin, who wouldn't make his bed. However, when Justin's mother told him that he could go outside when he made his bed, the bed was made in two minutes and his mother was able to praise and hug Justin for his desirable behavior.<sup>108</sup>

<sup>107</sup> Ibid.

<sup>108</sup> Becker, pp. 25-26.

Not only social reinforcement, but also a token economy can be implemented by parents to modify the behavior of their children. As described in an article by Elery Phillips, the token economy system which was designed to deal with a variety of social, self-care, and academic behaviors in the home-style treatment program for pre-delinquent boys proved to be practicable, economical, and effective. Token reinforcers, which took the form of points, were used which could be easily and rapidly administered and thus could bridge the delay between target behaviors and remote back-up reinforcing events. A child earned points for specified behavior and lost points for inappropriate behavior. At the end of the week a child could trade his points for privileges during the week, which included such categories as allowance, bicycle, television, games, toys, snacks, permission to go downtown, permission to stay up past bedtime, and permission to come home later after school. The programs involving this point system successfully modified aggressive verbal behavior, bathroom tidiness, homework preparation, and poor grammar.<sup>109</sup> However, just as within the school system, I think that this technique should be used only if social reinforcement fails, and that if it is used, provisions should be made for a gradual change to social reinforcement.

In commenting about the value of preventing behavior problems, Roger Ulrich, Marshall Wolfe, and Marland Bluhm claim that

<sup>109</sup>Elery L. Phillips, "Achievement Place. Token Reinforcement Procedures in a Home-style Rehabilitation Setting for 'Pre-delinquent Boys," in Control, Vol. II, pp. 71,79-80.

The value of preventing behavior problems as opposed to treating them only after the problem is well established seems apparent. The logical time to begin preventing behavior problems is at birth, and the logical institution to direct such efforts would appear in the long run to be public schools. This paper reports on our efforts to introduce scientific assumptions and science - based technology to the public school setting, for the purpose of both treating present behavior problems and preventing future problems. It is concerned not only with problems facing us but long-range need as well.<sup>110</sup>

The paper to which the authors are referring is a report of a study conducted in the Kalamazoo Valley Intermediate School District in which the efforts of social workers and other special personnel were directed toward both the classroom and the home. In all cases it became apparent that a child's problems could not be solved through simple counseling. The problems were being maintained by the general school and home environments, and the logical solution seemed to be to make greater efforts to change these problems by changing the environments. Thus, problems were identified as classroom or home problems.<sup>111</sup>

Within the school system, it was felt by the directors of this program that special school personnel should direct their efforts toward making the classroom teacher more adept at handling problems as opposed to dealing directly with the children outside the regular classroom. Furthermore, it was felt that it was important for specialists to help make school administrators more aware of the need to train teachers to handle problems in the setting where they are occurring and also to enlist their

<sup>110</sup>Ulrich, Wolfe, and Bluhm, pp. 334-341.

<sup>111</sup>Ibid.

support for changing the system so as to allow for the prevention of behavior problems. Consequently, on a number of occasions talks were given to local teachers who showed much enthusiasm for data from various applied studies using operant techniques. However, since a single talk was not sufficient for generating the actual practice of the methods described, a social worker designed a long-term inservice training course in which the content consisted of a very basic introduction to principles of operant conditioning and was oriented to problems which teachers faced daily. The major portion of the class consisted of laboratory work, the laboratory being the teachers' own classrooms. Teachers were required to work with specific problems identified in the weekly lecture-discussion session. Initial classes were concerned with basic principles of reinforcement, punishment, stimulus control, and motivation. Very quickly the majority of the discussion began to revolve around the teacher's everyday problems and how the consequences of her behavior could be used to modify the future probability of that behavior.<sup>112</sup>

However, it was the conviction of the directors of the program that the behavior principles being taught and applied in the school setting should also be presented to parents so that some of the same benefits being derived at school might be expanded into the home situation. They also felt that it

<sup>112</sup>Ibid.

would be beneficial for parents to be introduced to the importance of using systematic reinforcement for desirable behavior. It would not have been possible to reach all of the parents, but a beginning was made by offering a course for the parents of the children. Approximately 20 parents met every two weeks for a period of over six months to discuss problems typically found in the home setting, possible solutions which correspond with known principles of behavior, and the program being offered at school. Parents also conducted studies at home and presented data at the meetings.<sup>113</sup>

The constant goal of this program was to make school a success and a rewarding and enjoyable experience. Consequently, teachers and assistants spent considerable time thinking of ways in which the school environment might be arranged so that many rewards could be made contingent upon desirable behavior. The authors of the report on this study cite several measures of the success of this program, none of which seem to me to be directly related to the major goal:

1. Other schools in the country began to request similar in-service training courses.
2. Students at the universities were more frequently requesting assignments in public schools as assistants to the teachers.
3. A great deal of parental enthusiasm was expressed.
4. A number of teachers continued to enroll in in-service training courses to learn more about effective behavior modification.

<sup>113</sup> Ibid.

5. In several cases teachers decided to continue their educations for advanced degrees so they could instigate similar procedures. <sup>114</sup>

It is not possible, in my opinion, to list specific, all-inclusive steps by which a school social worker should attempt to modify behavior, because each case is unique and treatment should be based upon the individual. The preceding examples of various techniques are indicative of different possible methods of behavior modification which could be used by the school social worker. Within this fundamental knowledge and understanding of techniques of behavior control plus specific examples of the ways in which they have been implemented in various cases, the social worker must be creative, sensitive, and receptive to each individual situation.

We have now come to the crucial step of evaluating, weighing, both the positive and negative aspects of this technique of control. Should we even consider the possibilities of this method of control for social work? Because a storm of controversy has arisen regarding the merits and dangers of behavior modification, varied opinions have been expressed regarding this subject. As B. F. Skinner has commented, "Now the control of human behavior has always been unpopular. Any disguised effort to control usually arouses emotional reactions. We hesitate to admit, even to ourselves, that we are engaged in control, and we may refuse to control, even when this would be helpful, for fear of criticism."<sup>115</sup>

<sup>114</sup> Ibid.

<sup>115</sup> Rogers and Skinner, p. 301.

Both B. F. Skinner and Carl Rogers, two noted psychologists, agree that the modification of behavior has both potential merits and dangers. As Rogers states:

I believe we (Rogers and Skinner) agree that the behavioral sciences are making and will continue to make increasingly rapid progress in the understanding of behavior, and that as a consequence the capacity to predict and to control behavior is developing with equal rapidity.

I believe we agree that to deny these advances, or to claim that man's behavior cannot be a field of science is unrealistic.

I believe we are in agreement that the tremendous potential power of a science which permits the prediction and control of behavior may be misused, and the possibility of such misuse constitutes a serious threat.<sup>116</sup>

Rogers elaborates upon both the positive and negative possibilities of the modification of behavior:

We can choose to use our growing knowledge to enslave people in ways never dreamed of before, depersonalizing them, controlling them by means so carefully selected that they will perhaps never be aware of their loss of personhood. . Or at the other end of the spectrum of choice we can choose to use the behavioral sciences in ways which will free not control; which will bring about constructive variability not conformity; which will develop creativity not contentment; which will facilitate each person in his self-directed process of becoming; which will aid individuals, groups, and even the concept of science to become self-transcending in freshly adaptive ways of meeting life and its problems."<sup>117</sup>

Although Rogers appears to view behavior modification as having great potential, he is also extremely pessimistic about the probable utilization of these methods of control by society, as can be evidenced from the following comment:

<sup>116</sup> Ibid, p. 307.

<sup>117</sup> Ibid, p. 301

To hope that the power which is being made available by the behavioral sciences will be exercised by the scientists, or by a benevolent group, seems to me to be all hope little supported by either recent or distant history. It seems far more likely that the behavioral scientists, holding their present attitudes, will be in the position of the German rocket scientists specializing in guided missiles. . . . If behavioral scientists are concerned solely with advancing their science, it seems most probable that they will serve the purposes of whatever individual or group has the power.<sup>118</sup>

On the other hand, although Skinner recognizes the dangers inherent in the control of human behavior and the possibilities of the misuse of scientific knowledge, he seems to have a somewhat more optimistic view than Rogers about the possibilities of behavior modification:

Science is steadily increasing our power to influence, change, mold-in a word, control - human behavior. It has extended our understanding (whatever that may be) so that we deal with people more successfully in non-scientific ways, but it has also identified conditions or variables which can be used to predict and control behavior in a new and increasingly vigorous, technology. The broad disciplines of government and economics offer examples of this, but there is a special cogency in those contributions of anthropology, sociology, and<sup>119</sup> psychology which deal with individual behavior.

In fact, Skinner seems to almost insist on the necessity of behavior modification, and even suggests several safety measures to prevent the control of behavior from becoming coercive:

The danger of the misuse of power is possibly greater than ever. It is not allayed by disguising the facts. We cannot make wise decisions if we continue to pretend that human behavior is not controlled, or if we refuse to engage in control

<sup>118</sup> Ibid., p. 309

<sup>119</sup> Ibid., p. 301



when valuable results might be forthcoming. Such measures weaken only ourselves, leaving the strength of science to others. The first step in a defense against tyranny is the fullest possible exposure of controlling techniques. A second step has already been taken successfully in restricting the use of physical force. Slowly and yet imperfectly, we have worked out an ethical and governmental design in which the strong man is not allowed to use the power deriving from his strength to control his fellow men. He is restrained by a superior force created for that purpose - the ethical pressure of the group, or more explicit religious and governmental measures.<sup>120</sup>

Thus it appears that behavior modification, like almost any other form of "treatment", has great possibilities for helping people overcome problems and adjust to the society in which they live, and yet, at the same time, also has potential adverse effects which can be brought about through the misuse of this technique. Therefore, some people might be inclined to favor avoiding this particular techniques and implementing, instead, other techniques which have fewer possibilities of abuse. However, it is my contention that people are continually controlling or attempting to control and modify the behavior of others and thus it would be extremely valuable for the social worker to be familiar with the principles of behavior modification and the methods by which behavior is modified and controlled. Almost any situation in which people are relating with one another can be used as an example to illustrate this point. For instance, how do most parents react when one of their children intentionally destroys . . .

<sup>120</sup> Skinner, "Freedom", p. 15.

a cherished object which once belonged to great, great grandmother, or viciously clobbers a younger sister, or dumps a five-pound bag of flour on the new carpeting in the living? Do the parents praise the child, reassure him, say, "That's o.k. Do anything you want."? I imagine that the parents would usually attempt to modify the child's behavior and prevent it from occurring again in the future.

Or, how does a teacher react when a student cuts another child with a switchblade, or tears a library book into several pieces, or makes a great deal of noise when the teacher is attempting to explain something to the class? Doesn't she try to change the child's behavior, to modify it?

As another example, how does our penal system in this country react when a person viciously and intentionally murders eight people (with the exception of war, that is)? Is it considered acceptable, inevitable and irreproachable behavior which in no way needs to be punished or modified?

After beginning research on the subject of the modification of behavior, I found several authors who seem to agree with the conclusion which I had reached that all people control and are controlled. Florence Hollis says that, "Anyone who deals with people inevitably influences them in one way or another. ."<sup>122</sup> In a similar vein Skinner comments: "All men control and are controlled. The question of government in the broadest possible sense is not how freedom is to be preserved but what kinds of

<sup>122</sup> Ibid.

control are to be used and to what ends. Control must be analyzed and considered in its proper proportions."<sup>123</sup>

However, because of the aversion of most of our society to the idea of the control of behavior, it is not always obvious that techniques of behavior control and modification are being used. According to Skinner, the real nature of certain indispensable techniques, the commonest examples of which are education and moral discourse and persuasion, have been disguised. Through a masterpiece of misrepresentation, the illusion is fostered that these procedures or techniques do not involve the control of behavior; they are viewed, at most, as simply ways of "getting someone to change his mind." But analysis not only reveals the presence of well-defined behavioral processes, it also demonstrates a kind of control which "is no less inexorable, though in some ways more acceptable, than the bully's threat of force."<sup>124</sup>

Not only is the control of behavior a basic, though not always admitted, practice of most societies, but it also begins the moment a child is born. As expressed by Skinner:

The behavior of a child born into a flourishing society is shaped and maintained by variables, most of which are arranged by other people. The social variables compose the "culture" in which the child lives, and they shape his behavior in conformity with that culture, usually in such a way that he in turn tends to perpetuate it.<sup>125</sup>

<sup>123</sup>Rogers and Skinner, p. 306.

<sup>124</sup>Skinner, "Freedom," p. 14.

<sup>125</sup>Skinner, "The Design," p. 334.

I would now like to relate some of the implications of the above statements and conclusions more specifically to the field of social work. According to Donald R. Peterson, the social systems which are involved in the control and remediation of disordered behavior constitute a very large network of interrelated agencies and operations-- legal - correctional systems, the educational system, the political - governmental system, and religious systems.<sup>126</sup>

In my opinion, the overall role function of a social worker is to assist people in achieving improved social functioning. According to Hollis, in her book Casework: A Psychosocial Therapy, this often involves procedures of direct influence, whereby the worker tries to promote specific behavior on the client's part. For many years this type of activity has been suspect in casework, but it is now recognized that using the client's trust in the worker as a vehicle for influencing his behavior is sometimes a very useful form of treatment. However, three safeguards must be observed: the worker must be reasonably sure that he knows enough about what is best for the client, the worker must be quite sure that the need for advice rests in the client, the worker must be quite sure that the need for advice rests in the client and not in himself, the worker should induce the client, whenever, possible, to think things through for himself. Keeping these safeguards in mind, Hollis feels that "there are many situations in which the techniques of influence are appropriate."<sup>127</sup>

<sup>126</sup>Peterson, p. 96.

<sup>127</sup>Hollis, pp. 89-91.

In support of using behavioral techniques in counseling, Michael and Meyerson state:

At the beginning of behavioral counseling or psychotherapy, the counselor may have to manipulate determinants so as to facilitate the desired behavior coming under control of the "natural" behavioral consequences in the environment. Some professional workers perceive or create an ethical problem here by asking if it is moral for one person to attempt to control the behavior of another. This question has already been answered in our society and perhaps in all societies. Parents, educators, and guidance workers make no bones about their earnest intent to create and maintain the "good" behavior that is valued and approved of by the culture and to eliminate "bad" behavior to the maximum degree of which they are capable. It is not clear that the task of the counselor is, or should be, different.<sup>128</sup>

However, not only do Michael and Myerson support the use of behavioral techniques in counseling, but they also make what I feel to be a critical point when they comment upon the existence within the field of guidance of attempts to control other people: "For most of those to whom society entrusts the guidance of other, influencing or inducing people to behave in ways that society says are 'good' ways is an accepted goal, and the critical question is 'How can we motivate the person so that he does behave, wants to behave, and enjoys behaving in good ways?'"<sup>129</sup>

Social workers and guidance counselors are behavioral engineers - they attempt to modify, change, control behaviors which society considers deviant. Not facing this fact not only fails to take advantage of potential uses of behavior modification,

<sup>128</sup>Michael and Meyerson, p. 42.

<sup>129</sup>Ibid.

but it can also be potentially dangerous. Behavioral control represents a relatively new, important, and very useful development. However, it can also be horribly misused, according to Leonard Krasner, unless the psychologist or social worker or guidance counselor "is constantly alert to what is taking place in society and unless he is active in investigating and controlling the social uses of behavioral control."<sup>130</sup>

The need for understanding in the social and behavioral sciences is compelling; social problems press for solution, and in general, tasks involving people are growing rapidly in both number and complexity. It is apparent, according to Howard E. Parris, Neil D. Kent, and Douglas E. Henderson, that many of the solutions to these problems will come from a diligent application of the methods of science to the behavior of men.<sup>131</sup>

In speaking specifically of the relevance of behavior modification to the field of counseling within the school system, Michael and Myerson comment:

. . . it seems reasonable to believe that if the school counselor systematically learned to utilize only a small number of principles such as the behavior - influencing power of positive reinforcement, the undesirable long range consequences of aversive control, and some of the details regarding the shaping and developing of stimulus control, he could fulfill his job functions with greater efficiency. It is not so much that a behavioral approach would necessarily change a great deal of what the counselor did, but he would know why certain activities such as recognition of merit are good and other activities such as grading on the curve are not. Knowing the effects of these activities, he might come to manipulate them

<sup>130</sup> Leonard Krasner, "Behavior Control and Social Responsibility," in Control, Vol. I, p. 321.

<sup>131</sup> Howard E. Parris, Neil D. Kent, and Douglas E. Henderson, "Teaching Behavioral Science in the Elementary & Junior High School," in Control, Vol. II, p. 309.

more effectively. He would also come to ask, in each case of deficient or mal-adaptive behavior, how behavior was linked to consequences, instead of measuring abilities or personality, attempt to alter consequences so as to shape up more desirable behavior.<sup>132</sup>

There are many people, however, who criticize and fear the use of principles of behavior modification to attempt to alter the behavior of children, because they "don't believe in bribing children." The critics who make this comment appear to be expressing the belief that children should voluntarily engage in certain behaviors because "it is for their own good" or "it is the right thing to do," and that it is somehow ineffective, dishonest, evil, or contrary to some immutable moral law to offer them extrinsic inducements to behave as they "should" behave. However, according to Meyerson, Kerr, and Michael,

Such critics appear to forget that infants and children learn to behave in ways that significant others in their lives consider right and good - they are not born with such behaviors. The learning is accomplished as a consequence of thousands and thousands of materially and socially reinforced responses and exposure to the naturally reinforcing or punishing contingencies of the environment.<sup>133</sup>

In conclusion, I would like to quote a statement made by B. F. Skinner which seems to me to be particularly relevant to the controversial issue of the control of human behavior:

If we are not to rely solely upon accident for the innovations which give rise to cultural evolution, we must accept the fact that some kind of control of human behavior is inevitable. We cannot use good sense in human affairs unless someone engages in the design and construction of environmental conditions which will affect the behavior of men. . . We are all

<sup>132</sup>Michael and Meyerson, pp. 44-45.

<sup>133</sup>Meyerson, Herr, and Michael, p. 236.

controlled by the world in which we live, and part of that world has been and will be constructed by men. The question is this: Are we to be controlled by accident, by tyrants, or by ourselves in effective cultural design?<sup>134</sup>

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<sup>134</sup> Skinner, "Freedom", p. 15.



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