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The effects of social skills training and the development of positive and neutral verbal statements in maladjusted adolescents.

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THE EFFECTS OF SOCIAL SKILLS TRAINING AND THE DEVELOPMENT OF

POSITIVE AND NEUTRAL VERBAL STATEMENTS IN MALADJUSTED ADOLESCENTS

A Dissertation Presented

by

J. MELINDA RIGNEY

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School of Education

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ABSTRACT

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POSITIVE AND NEUTRAL VERBAL STATEMENTS IN MALADJUSTED ADOLESCENTS

(February 1986)

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Ed.D., University of Massachusetts
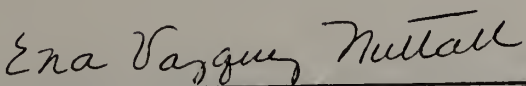
Directed by: Professor Ena V. Nuttall

This study measured the effects of social skills training on the
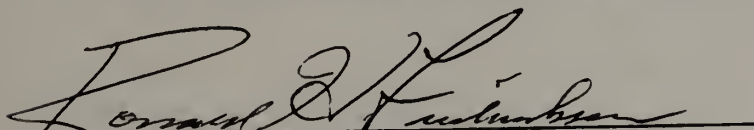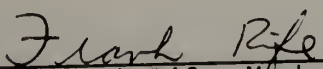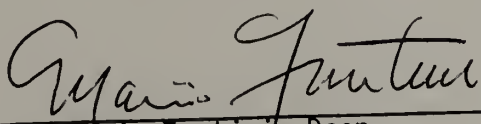development of positive and neutral verbal statements by maladjusted
adolescents at a northeast American vocational high school. A single
subject research paradigm was used. A set of cognitive behavioral
procedures, including self management, presentation of a rationale,
positive reinforcement of alternative responses, modeling, practice
and feedback were used to develop positive and neutral verbal state-
ments over a seven week training period. There were three additional
maintenance weeks. The social and behavioral effects of this social
skill training on the five experimental subjects were then compared
to the five control subjects.

Before treatment, experimental subjects were presented with an
oral formal rationale. This included information that helped them
decide whether to accept participation in this study. A longitudinal
time line design was used to assess direct and collateral behavior
change.

The most notable among the changes in behavior was the dramatic
reduction in detentions by four of the five experimental subjects.

There were no further suspensions by any experimental subject after treatment.

Also, teachers rated these experimental subjects higher in co-operation, constructiveness, and rapport with peers.

Other measures used did not yield significant results. These were the Hahnemann High School Rating Scale, sociometric measures of social attractiveness, self rating scales of perceived mental health and happiness, and Semantic Differential factor scores for four different concepts.

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ADOLESCENCE

Adolescence is a turbulent time for many people. Bodies are
changing rapidly, sometimes more rapidly than intellect. Societal
expectations are also changing, as is the amount of demands that are
placed on the individual. School work is harder and more challenging.
Relationships are, for the first time in many years, becoming increas-
ingly complex. Parental conflicts too, are rising and sexuality is
developing. All of these factors contribute to the stressful period
of time known as adolescence.

Although it is generally stressful, adolescence is not a single
stage. Early adolescence is very different from later adolescence.
Socially, early adolescence is marked by isolated unisexual cliques.
Later adolescence is marked by the beginning of crowd disintegration
and loosely associated groups of couples (Dunphy, 1963). These groups
of couples are the beginning of the pairing off in preparation for
adult life.

Politically and ideologically, there is a shift toward greater
political and economic liberalism as the adolescent grows older.
This is attributed to a greater maturity and ability, with increasing
age, to understand the complexity of motivations of people and their
rejection of simplistic explanations (Mussen, Sullivan, Eisenburg,
1977). Although older students are more liberal than younger adoles-
cents, attitude change is most easily affected in younger junior high

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school age students (Shiver, 1970).

As age affects attitudes, so does gender. Females tend to be more flexible and open to attitude change than males (Shiver, 1970). When females are exposed to masculine oriented persuasive communication and males are exposed to feminine oriented persuasive communications, female subjects tend to be more susceptible to suggestion (Shiver, 1970).

Adolescence is a difficult time for most but for some the problems are more severe. Conduct disorders are one of the disorders that can affect the adolescent.

> The essential feature is a repetitive and persistent pattern of conduct in which the basic rights of others or major age appropriate societal norms or rules are violated. The conduct is more serious than the ordinary mischief and pranks of children and adolescents (American Psychiatric Association, 1980, p. 45).

The types of conduct disorders are undersocialized, aggressive; undersocialized, nonaggressive; socialized, aggressive; and socialized, nonaggressive.

With all of these classes of conduct disorders there are problems at home and in the community. There is often precocious sexual activity. There is a tendency for the adolescents to blame others for all their misfortunes. They are mistrustful of others and they often have low self esteem. They can appear tough; smoking, drinking and abusing substances earlier than their more adjusted counterparts. They are characterized by "Poor frustration tolerance, irritability, temper

outbursts, and provocative recklessnesses . . ." (A.P.A., 1980, p. 46). Often grades are lower and occasionally attentional deficits are present. There may be complicating developmental disorders.

Some cases improve with time but others become chronic and require adult classification in later years. The extent of impairment is also variable. Social problems that may arise are school suspensions and expulsions, difficulties with the law, substance abuse, pregnancy, accidents due to extreme risk taking, fighting, venereal disease, and suicide (A.P.A., 1980).

Other disorders that involve adolescents are Separation Anxiety Disorder, Avoidance Disorder of Adolescence, Overanxious Disorder, Schizoid Disorder, Elective Mutism, and Oppositional Disorders.

The essential features of the Oppositional disorder are "a pattern of disobedience, negativistic, and provocative opposition to authority figures" (A.P.A., 1980, p. 63). If the rights of others are violated, a Conduct disorder diagnosis is more likely. There can be temper tantrums and passive resistance to authority with this disorder. It can interfere with all their ongoing relationships and can result in a refusal to learn, especially the material presented to them by the educational system.

Adolescents are also affected by Eating Disorders, Identity Disorders, Movement Disorders with Physical Manifestations, Sleep Disorders, and Developmental Disorders. In addition to these classifiable mental disorders there are isolated acts of antisocial behavior that are not attributable to a mental disorder but result in the nec-

essity of treatment or attention by social service agencies.

Even without these extensive mental health problems this age range is trying. Part of the reason for this difficulty is the ability of the adolescent to think of the future and to form attitudes. Children are usually involved in the safety of the present.

> Many of the social and emotional concerns of the adolescent--his preoccupation with values, his characteristic dissatisfaction with the world in general, and his parents in particular, even much of his egocentricism are to some extent a function of his new found capacity for formal operational thought (Mussen, Conger, Kagan, 1969, p. 620).

In addition:

> The adolescent is now able, not only to grasp the immediate state of things but also to grasp the possible states they might or could assume. This new awareness of the discrepancy between how things are and how they might be--at home, at school, with themselves--probably underlines many of the recurrent adolescent feelings of depression and dissatisfaction. The awareness of this discrepancy between the actual and the possible also helps to make the adolescent a rebel. He is always comparing the possible with the actual and discovering that the actual is flagrantly wanting" (Elkind from Mussen et al., 1969, p. 621).

One job that educators and school counselors have is to facilitate the development of new social skills, values, and attitudes that will personally and academically help, not hinder, the individual. This is especially challenging with the handful of students who often operate on the external fringe of the school system, the student who requires the services of the school adjustment counselor, school psychologist, or social worker and who sometimes has conduct or opposi-

tional disorders to complicate the difficult period of adolescence.

A Problem That Can Be Helped

Both positive and negative emotions are normal reactions to situations. The person who desires and holds only positive feelings and emotions is setting excessive demands upon himself. But it has been shown that an over abundance of negative feelings is unhealthy and maladjustive (Coleman, 1969). Such a prevalence of negative feelings show that a person feels threatened and as a result has developed defiance oriented behavior. These general negative attitudes about life's events, institutions, and relationships will influence future perceptions of subsequent situations that will further interfere with the development of competence and maturity (Coleman, 1969). They make life more troubled and painful and decrease their ability to develop and maintain themselves in positive, constructive ways (Johnson, 1980). In direct contrast, a person with predominantly positive feelings shows a healthy emotional system. Positive feelings are conducive to positive self-esteem, adequacy, and self actualization.

It is important to speak of social attitudes and their effects on behavior. Rotter felt that:

> A person's behavior in relationship to some stimulus, from the social point of view, is determined not merely by his expectations regarding the nature of the stimulus but by his expectations of what behavior towards this stimulus will be rewarded and the value of these rewards (Rotter, 1954, p. 212).

If negative attitudes are prolonged and intensified they can lead to anger and ultimately aggression (Novaco, 1979). Moreover, positive human emotions, such as elation, are directly associated with or result directly from thought or internalized language such as 'This is good,' a positive statement. Negative human emotions such as depression and anger are similarly associated with internalized language of 'This is bad' (Ellis, 1962).

Except in very difficult stress situations, the emotionally competent person usually keeps his or her perceptions and emotions positive. See Table 1 for the extent of maladaptive behavior in school age children.

Apparently the extent of maladjustment is high. Moderate maladjustment rates are reported internationally, ranging from 22% to 42%, with the mode being in the 20s. Severe maladjustment is found in 4% to 13% of the children.

In Table 2, also developed by Swift and Spivack, the percent of children abberant on each behavior dimension in normative and urban samples is presented. Although this study did not include adolescents, it is extremely relevant to this research to note the percentage of students with negative feelings and actions. These negativity problems seem to increase with each grade level and be highly prevalent in all the samples studied.

Attitudes help determine whether life is frustrating or gratifying. If social skills can be reliably measured and trained and if these positive and neutral verbal statements about home, school, fam-

Table 1

Extent of Maladjustment Among Children of School Age

Investigator/Reporter and Date	Place	N	Age or Grade	Percent of Maladjusted Students	
				Moderate	Severe
Wall, 1955	Eight countries	-	Ages 5-16	22-42	4-12
Wall, 1956	Denmark	-	School age		20-22*
Chazan and Jackson, 1971	England and Wales	726	Ages 5-6		24*
Pringle, 1966	England	9817	Age 7	23	13
Glavin and Quay, 1969	Rural Tennessee	-	-		13
Stennett, 1966	Rural Minnesota	333	Grades 4-6		22*
Ullman, 1957	Rural and suburban Maryland	810	Grade 9	22	8
Bower, 1960	California	5500	School age		10
Rogers, 1942	Columbus, Ohio	1524	Grades 1-6	36	12
USDHEW, 1972	United States	7119	Ages 6-11		17-22*
Kellam and Schiff, 1967	Chicago, Illinois	2010	Grade 1		25-40*
Silver and Hagen, 1972	Manhattan, New York	168	Grade 1	30	10
Swift and Spivack, 1971	West Chester, Pennsylvania	809	Grades K-6		40*
Swift, Spivack, Danset, Danset-Leger and Winnykamen, 1972	Paris, France	1325	Grades K-4		40*

*Moderate and severe combined.

Note: From Alternative Teaching: Helping Behaviorally Troubled Children Achieve (p. 4), by M. Swift and G. Spivack. 1975. Champaign, Illinois: Research Press. Copyrighted 1975 by Research Press. Reprinted by permission.

Table 2

Percent of Children Aberrant on Each Behavior Dimension
in Both the Normative and Urban Samples

	Grade Level							
	Kindergarten		Grade 1		Grade 2		Grade 3	
	Norm	Urban	Norm	Urban	Norm	Urban	Norm	Urban
	N = 101	N = 551	N = 121	N = 128	N = 118	N = 474	N = 107	N = 509
Inattentiveness and withdrawal from class activity	14	24	17	33	9	32	17	38
External reliance and intellectual dependence	14	23	17	36	9	35	20	40
Poor rapport with teacher	13	15	21	18	23	19	25	24
Impatient or unreflective	13	21	12	34	12	34	14	40
Lack of personal initiative and involvement	14	25	28	38	27	40	20	40
Irrelevant talk	19	24	17	29	9	30	18	30
Negative feelings and actions	12	20	11	35	8	25	21	43
Achievement anxiety	-	18	24	18	12	19	12	23
Restless, disturbing	16	17	13	32	12	32	23	37
External blaming	13	14	10	24	9	25	25	34

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ily, self and other relevant topics can actually be increased through the combined efforts of behavior therapy and cognitive behavior therapy, there is reason to presume that the actual attitudes held can be changed. Both Bem's Social Theory of Self Perception and Cognitive Dissonance Theory support the contention that "More people behave themselves into new ways of thinking than think themselves into new ways of behaving" (Peterson, 1968, p. 41).

Attitudes are learned dynamically and continually and are open to modification and change and are repeatedly affected by others (Johnson, 1980; Watson and Tharp, 1977). The adolescent egocentricism accelerates the move towards searching for values. They are ripe for experimenting with new personal and social systems (Elkind, 1970).

This new ability to think in positive terms, hopefully stimulated by the increase of positive and neutral verbal statements, can be seen as the building blocks upon which all social and vocational development can be based (Sarason and Ganzer, 1969). With a stronger foundation to build upon the range of additional social skills that the maladjusted adolescent needs can then be attempted, hopefully with greater success than before this foundation was established.

Definition of the Terms

Attitudes--are the way an object, self, acts, or others are evaluated. They can be positive, negative or neutral. They also influence how a person responds towards the stimulus.

Beliefs--are the set of concepts a person employs in guiding his own behavior. They are made up of personal and social constructs, rules of personal and interpersonal behavior, and the things people weigh to themselves as they plan, enact and recall behavior.

Bem's Social Theory of Self Perception--individuals actually infer their attitudes from their behavior.

Cognitive Dissonance--when an individual behavies towards an object or entity directly opposite their attitude toward that object or entity there is a resultant change in their attitude in the direction of the behavior change. The change theoretically occurs because the individual perceives a discrepancy between the previously held attitude and the behavior induced and is motivated to change.

Collateral Behavior--a behavior that simultaneously changes when another behavior is reinforced.

Communication--social interaction in which information is mutually conveyed from each person to the other, mostly verbally but not exclusively.

Differential Reinforcement--(1) The reinforcement of one class of behavior and not another. (2) The reinforcement of a response under one stimulus condition but not under another. (3) The reinforcement of one response under one stimulus condition while other responses are reinforced under different stimulus conditions (Sulzer-Azaroff and Mayer, 1977).

Negative Verbal Statement--a statement spoken with visible signs of physical tension in the facial muscles and which is of destructive

nature (e.g., "School is really awful").

Neutral Verbal Statement--a statement spoken without visible
signs of physical tension in the facial muscles and which appears
free of value judgement (e.g., "I wish we had more free time in
school").

Operational Definition--the product of breaking down a broad
concept into observable and measurable component behaviors.

Positive Verbal Statement--a statement spoken in a pleasant tone
of voice, with no visible signs of physical tension in the facial
muscles and which is of a constructive nature (e.g., "School is
wonderful").

Reliable Measurement--this occurs when measuring devices remain
standard regardless of who uses it and under what condition. Consis-
tency.

Reinforcement of Alternative Behavior or Resposes (ALT-R)--a re-
inforcement procedure designed to reduce a given behavior by increas-
ing specific behaviors that are alternatives to the behavior being
reduced.

Role Play--a situation in which an individual is asked to take a
role or behave in a certain way not normally his own, or if his own,
in a place not normal for the enactment role.

Self Concept--the individual's assessment, partially unconscious,
of his position on a variety of dimensions that the social environment
regards as important.

Social Reciprocity--what occurs when by teaching a social skill

to an individual that individual affects another by increasing their
ability on the same skill.

CHAPTER II

REVIEW OF THE LITERATURE ON SOCIAL SKILLS TRAINING

Social skills are undoubtedly important to all people but their specific training is especially relevant to the maladjusted adolescent whose social skills are often considered inadequate by conventional society.

Although the specific social skill of making positive and neutral attitude statements is of primary concern here, it is impossible to look at any social skills training program without attention to its reliability, validity, and the success of social skills training programs beyond just the learning of the skill specifically trained. Also of utmost interest is the type of theory and procedures that best insures that the skill in hand will be developed adequately, generalized to new situations, and maintained after the last experimental or training day has ended.

Social Skills and Reliability

Can social skills be reliably measured? It appears that they can if researchers take adequate precautions. Cook and Apolloni (1976) found that positive social emotional behavior may be operationally defined and monitored. Spence (1981), too, found that after social behaviors were defined they could be accurately and reliably measured. In her study of seventy convicted young males designed to determine

the correlation between specific social skills and subjective ratings by judges on friendliness, employability, social anxiety and social skills, interobserver reliability was as high as 1.0 for gross body movements; .99 for smiling, eye contact, fiddling; .98 for latency of response; .95 for appropriate head movements; .93 for gestures, dys-fluencies; .89 for attention feedback responses; .80 for the amount spoken, and questions asked and as low as .76 for verbal initiations.

In another study by Minkin, Braukmann, Minkin, Timbers, Timbers, Fixsen, Philips, and Wolf (1976), reliability was assessed 128 times. Point by point occurrence, nonoccurrence, and gross reliability mea-sures were used. The behaviors targeted were questioning, providing positive feedback, and the proportions of time spent talking. Agree-ment between the thirteen adult judges on the number of conversational questions was assessed on 48 occasions. The mean point by point agreement was 94%, mean occurrence agreement was 90%, and the mean nonoccurrence agreement was 91%.

In the same study, positive conversational feedback was assessed 50 times for reliability. The mean point by point agreement was 92%, mean occurrence reliability was 89% and the mean nonoccurrence agree-ment was 90%. Interobserver reliability for the amount of time spent talking was assessed 30 times and the mean gross agreement was 98%.

Social Skills Training and Validity

If social skills are reliably measured, are they also valid to

teach? Does the microskill of smiling mean anything more than that the individual can smile, or are there greater social implications which would justify the teaching of such microskills?

Oden and Asher (1977), in their study of twelve school age children, noted that students who were socially isolated were more likely to drop out of school, become juvenile delinquents or have mental health problems. They coached their isolates on specific social skills of participation, cooperation, communicating, validating and supporting and found an increase on sociometric rating scales and friendship nominations effective as long as one year after the experimental conditions.

Spence (1981), in her excellent study, found correlations between being judged as friendly with the amount of smiling, initiations, questions asked, interrupting, making eye contact, and the number of speech dysfluencies. She also found correlations between fiddling, avoiding eye contact, rarely initiating, moving one's head inappropriately and being judged as socially anxious. People judged to be socially skilled spoke fluently, asked questions, interrupted, made eye contact and replied promptly. Those judged as employable smiled frequently and asked questions. There is also a high correlation between employability, friendliness, and social skills. It does appear that specific microskills are extremely valuable to the individual as they do seem to affect the judgement and general impressions that the individual makes upon others.

Another study illustrating the validity of social skill training

was by Minkin, Braukmann, Minkin, Timbers, Timbers, Fixsen, Philips, and Wolf (1975). These researchers found that when adolescent female youth offenders were trained in three reliable measures of conversation they were simultaneously given higher general impression scores on their conversational ability.

Maloney, Harper, Braukmann, Fixsen, Philips, and Wolf (1976) also found that by training girls in volunteering answers, they were subjectively judged between 70 and 100% more appropriate in their behavior.

Spivack and Swift (1973) studied seventh- to twelfth-grade children and their adjustments to classroom demands. They found five factors related positively to academic success. (Two of these success factors were verbal interaction and rapport with the classroom teacher and are hypothetically influenceable by increasing positive and neutral verbal statments in subjects.) They also identified eight factors negatively related to academic success. Verbal negativism and criticism were among these. They noted that negativism seemed to appear more frequently in the special classes and hypothesized that perhaps this was because in the smaller classes negative statements were more likely to be attended to, than in regular size, mainstreamed classrooms. Another explanation of this phenomenon might be suggested by some of the work by Strain (1981) utilizing classroom peers as behavior change agents. It is possible that special needs students have more negative behavior because of the negative way people interact with them.

Improving the adolescent's social skills does appear to affect more than just the behavior measured and targeted for change. Because improvement of individual social skills affects the lives of the client so greatly and touches the lives of others through social reciprocity, it does appear to be a worthwhile task for the school or community counselor, teacher, psychologist or parent to foster in their young clients and students.

The Effectiveness of Social Skills Training

B.F. Skinner (1948, 1974) believed that behavioral techniques could be used to successfully produce environments where cooperation, friendship and peace prevailed. Lazarus (1973) also believed that behaviorism should teach people to emit expressions of love, adoration, affection, appreciation, compassion, tenderness, warmth and other positive feelings.

Prosocial behavior is most likely to be engaged in when the individual has been rewarded for engaging in that sort of behavior previously and when the individual has been exposed to models displaying such behaviors. The angry or aggressive youngster is often deficient in the prosocial skills of self control, negotiation, empathy, and dealing with anger (Goldstein, Apter, and Harootunian, 1984).

"Many of the psychopathological symptomatic deviant and maladaptive behaviors result from a disbelief that behaving in constructive

prosocial ways would be successful" (Ducette and Wolk, 1972). It
seems that the most effective way to teach prosocial behavior is to
alter specific behaviors, not just concentrate on values and attitudes
(Goldstein, et al., 1984). The following studies are a few of the
many that have attempted to develop prosocial behavior. All have
concentrated on training new adaptive behavior instead of punishing
the dissocial. This can be one of the most constructive and least
hazardous methods of creating appropriate social behavior (Bandura
and Walters, 1963; Sulzer-Azaroff and Mayer, 1977).

Several studies illustrate that these appropriate social skills
can be taught (Bornstein, Bellack, Hersen, 1977; Minkin, Braukmann,
Minkin, Timbers, Timbers, Fixsen, Philips and Wolf, 1976; Spence,
1981; Kifer and Lewis, 1974), especially if they are adequately de-
fined for reliable measurement.

For instance, Maloney, Harper, Braukmann, Fixsen, Philips and
Wolf (1976) studied four girls, thirteen to fifteen years old, juve-
nile offenders at the Achievement Place for Girls in Kansas. They
trained these girls in conversation behavior. The subjects received
tokens for attending the sessions and for volunteering answers, which
was the target behavior. The amount of the volunteering increased
substantially. Subject 1 went from 30% to 92% after training; Sub-
ject 2 went from 30% to 89%; Subject 3 from 23% to 90%; and Subject 4
went from 68% to 98%, clearly an indication that the skill of volun-
teering answers can be taught. Unfortunately, those researchers
failed to do follow-up studies to determine whether these gains were

maintained by the girls in their natural environment.

When Bornstein, et al. (1979) trained four unassertive children in social skills, they used a class of treatments which included instructions, feedback, behavioral rehearsal and modeling; often referred to as a structured learning model, they were able to identify and measure specific behavioral characteristics of these unassertive children, provide the necessary training and foster generalization to other interpersonal situations. The target skills of that study were increasing eye contact, duration of speech, audibility of the response, and the number of requests made. The training took three weeks. Each behavior was targeted sequentially and cumulatively. The subjects' behaviors changed markedly after training and the change was still apparent during a follow-up measure at two and four weeks. The new skills were acquired successfully and maintained, as evidenced in the follow-up work done by these researchers.

Instead of focusing on eliminating problem behavior, in their study of three youth offenders and a same sex parent, Kifer and Lewis (1974) sought to teach new adaptive behavioral negotiation responses to hypothetical conflict situations using behavioral rehearsal and social reinforcement. In that study, the researchers broke down negotiation and taught it in small components. They taught these skills simultaneously to parents and students. Then a scene was set and the list of options available was described, including the consequences of each option. Agreement was divided into two categories, compliant and negotiated. Negotiated agreement was preferred and reinforced

highly. This training was very successful, parents and students learned negotiation skills.

Spence (1981) took a look at the social skills necessary to do well in an interview. She first operationally defined thirteen behaviors that she felt may affect an individual during an interview: gestures, fiddling, gross body movements, eye contact, dysfluencies, attention feedback responses, the amount spoken, interruptions, questions asked, initiations, latency of response, smiling, and appropriate head movements. The measures of these skills were then correlated with subjective scoring by judges on friendliness, social anxiety, social skills and employability. The results of these correlative studies, which were given earlier in the text, indicate that social skills are a valuable teachable component of education and counseling.

Bornstein, Bellack, and Hersen (1977) found that it was important not just to state positive feelings and ignore all the negative when training unassertive children in effective social skills. Training just for positive statements of feeling does not develop the necessary degree of assertiveness and should be avoided.

Rogers-Warren and Baer (1976) found that when five small groups of preschoolers were taught to share and praise by modeling and were reinforced for reports of sharing and praising, there were increases in the rate of reporting incidents, but the children were not always truthful. In their second experiment, they only reinforced true reports of the target behavior. They developed this true reporting by shaping. First, they reinforced any true report of any behavior.

Then they reinforced a true report of either sharing or praising, and finally, they reinforced a combination of the two behaviors. This reinforcing of true reporting freed the teacher from needing to be present at any time other than during reporting and the delay of reinforcement it allowed kept ongoing activities from being interrupted. These experimenters also reported that sharing generalized to a second setting but praising did not, indicating that praise and verbal complimenting may be difficult for children to develop and maintain.

Mutually Aversive Reactions

Adolescents in jeopardy in school and the community often lack certain social skills. That has been clearly established throughout this paper. This lack of social skills appears to generate social failure and set a pattern for inappropriate interpersonal relationships well into adulthood. These inappropriate interactions increase the potential for psychiatric disorders (Arieti, 1979). The negative experiences that are the end result of low social skills increase avoidance responses to social situations, which further impedes the development of social skills (Bornstein, et al., 1977). This chain needs to be broken to increase the mental health of the individual.

Polirstok and Greer (1977) took data on four teachers' approval and disapproval of a female student regarded as a major discipline problem. They found that training can increase student approval and simultaneously decrease disapproval. The student's problems were, in

part, attributable to a mutually aversive interaction between the
student and teacher.

In such mutually aversive interactions, the student disapproves
or acts offensively and then the teacher disapproves. A destructive
cycle is formed and it appears to escalate. At some point, the inter-
action becomes unacceptable. This is when suspensions, dropping out
of school, and expulsions are likely to occur. Clearly, it is a down-
ward destructive spiral that needs to be broken.

Training the teacher in contingent positive reinforcement can
help break this cycle, but another way to approach the same problem
is to train the subject to break the chain. That was precisely what
Polirstok and Greer (1977) did. On the first two days, the entire
class studied made a list of behaviors that they appreciated in
teachers and they felt that teachers would appreciate in them. On
these days, all the students role-played behaviors defined as student
approval of teachers. On the third day, a targeted problem student
role-played the appropriate teacher approval behavior while the class
role-played the appropriate student approval. On Days 3, 4 and 5 the
targeted subject practiced the positive student approvals into a tape
recorder after receiving a rationale that this would help her socially
and academically. She also received tokens for approving of the
teacher. This substantially changed her approval behavior and broke
this destructive, mutually aversive chain. The resulting increase in
her approval levels increased the levels of three of four of her
teachers' approval rates. Six weeks after the experimental condition,

the approval rates of the targeted student and the three teachers re-
mained significantly above baseline level. This leads to the concept
of social reciprocity.

Social Reciprocity and Collateral Behavior Change

Improving social behavior affects attitudes of people positively
because they are more likely to receive social positive reinforcement
for their new social skills. A large amount of collateral behavior
will change concurrently when new social skills are taught (Cooke and
Apolloni, 1976).

Cooke and Apolloni (1976), in their careful study of four school
age learning disabled students, taught the social skills of smiling,
sharing and positive physical contact. During two, 16-minute inter-
vals daily for five days, subjects received instructions, modeling
and social praise to increase smiling. The next five days they added
sharing with one another. During the following five days, smiling,
sharing, and/or physical contacting were instructed, modeled and
socially praised. In the last training period, verbal complimenting
was added to the targeted behaviors. All of these behaviors were
learned, and there were substantial increases in other nonexperimen-
tally targeted collateral behaviors. In addition, untrained subjects
who were exposed to trained subjects demonstrated simultaneous gains
in all the skills taught except verbal complimenting.

Madsen and Madsen (1974) tried to pinpoint increasing positive

verbalizations about self and the concurrent social interactions of one socially isolated sixteen-year-old boy. They recorded his positive verbalizations. Then they listed the hierarchy of his interests and positive points about himself and his parents. He was instructed to carry the list in his pocket and read it whenever he caught himself in self abasement. This provided him with a positive incompatible response to his maladaptive behavior. In addition, he was reinforced for initiating peer contact one time per day, and verbally interacting with his parents ten minutes per day. At the end of the study, he developed one close friendship, joined a science club and was talking positively about himself and his parents, which was more social skills than were actually taught.

Such studies as these and the work by Strain utilizing peers as agents of behavior change (1981) provides substantial evidence for social reciprocity and collateral behavior change, which can and do occur frequently when adaptive social skills are taught.

Cognition and Its Effect on Behavior

In the study of human behavior, the importance of cognitive activity cannot be minimized. The theories of Cognitive Dissonance (Festinger, 1957) and Bem's Social Theory of Self Perception are both relevant to the understanding of the influence of cognitions on human behavior.

One study in 1978 examined the extent that evaluative language

can stimulate the more socially desirable position on an issue. It suggested that biased language may result in a change of attitudes held by adolescents (Eiser and Osman, 1978). In another study, students were required to incorporate words from a list, either implying a negative or positive bias when writing an evaluation of authority. It was concluded that a person's attitude may be related to the kind of evaluative language applied to an issue, and when a person is induced to use language implying a positive evaluation of an issue, that person may change his or her attitude to be a closer approximation of the language used (Eiser and Dancer, 1979). Whether or not the short term attitude change found here holds over time was not concluded.

One reason given for this change is cognitive dissonance. When an individual behaves toward an object or entity directly opposite their attitude toward the object or entity, there is a tendency to change the attitude in the direction of that behavior. This change theoretically occurs because the individual perceives a discrepancy between the previously held attitude and the behavior induced, and is motivated to change.

Klagholz (1973) was curious about whether a change in attitude stimulated by an initial change in behavior was caused by cognitive dissonance or followed more closely Bem's Social Theory of Self Perception. In this last theory, individuals actually infer their attitudes from their behavior. The individual, when required to behave in a specified manner towards an entity, will have their attitude

change in the direction of the behavior practiced. For example,
Klagholz's study, sampling seventh- and eighth-graders in Washington,
D.C., showed that the researchers could actually change attitudes
toward a neutral nonsense syllable by first inducing subjects to use
positive language while writing positive and negative stories about
the nonsense syllable TEJ. He concluded that if using positive or
negative language affected a person's attitude towards a neutral non-
sense syllable, cognitive dissonance was less of a factor than Bem's
Theory. In summary, attitude is actually inferred from either the
positive or negative verbal behavior.

When people do change their attitudes, they are afraid people
will perceive them as inconsistent. They also need to reduce the
dissonance associated with the inconsistency in their original and
changed attitudes. One convenient way to reduce this fear is to
overlook, distort, and forget the original position (Goethals and
Reckman, 1973). Goethals and Reckman (1973) hypothesized that people
even distort their recollections of initial attitudes after an atti-
tude change in order to maintain cognitive consistency. Their study
showed that subjects remembered prior attitudes about busing systema-
tically in the direction of the persuasive argument they received
after filling out an initial questionnaire. A second questionnaire
administered after the argument revealed that the subjects recalled
all their original positions on all the other topics except the tar-
geted busing topic.

Krug (1977) found that if one attitude was experimentally manipu-

lated, the result would be changes in other related attitudes. It
seems that not only are attitudes and verbal behavior directly influ-
enceable, but that a change in some attitudes affects a larger atti-
tude base. Attitudes are not separate entities, but part of a unified
world view. There must be internal consistency and an adequate ges-
talt or meaningful whole (Johnson, 1980).

Kanfer and Goldstein (1980), two cognitive behaviorists, felt
that cognitive phenomena must be incorporated into the behavioral
model. The largest amount of work of the cognitive behaviorists arose
out of the 1970s (Goldfried and Goldfried, 1980). The techniques are
varied, but all strive to teach their clients to appraise situations
more accurately, more constructively, and to respond more appropri-
ately to that more rational appraisal.

Cognitive Behavior Change for Social Skills Development

Cognitive behaviorism has developed some of its own procedures.
It also employs the practices of the separate traditions of cognitive
psychology and behavioral psychology. There seems to be no inherent
compatibility among the methods (Peterson, 1968).

Probably the single biggest difference between cognitive behavior
therapy and traditional behavior therapy is that in the first therapy
the client's appraisals, expectations, and self-evaluations are all
deemed important, as these cognitions affect their behavior
(Meichenbaum, 1976).

Cognitive behavior therapy consists of three phases, although they do not follow a definite sequence and can be repeated as often as necessary and in any order (Meichenbaum and Genest, 1980). In Phase One, the conceptualization of the problem occurs. Throughout the assessment, the therapist tries to give the client a sense of control and a feeling of hope for change. The client is an active participant, doing homework assigned by the therapist to see the self-defeating nature of their thinking and to look at what has stimulated the problem behavior and how it is being maintained.

Phase Two has the client trying on the conceptualizations and reporting on the homework assignments given by the therapist in Phase One. Reinforcing self statements are encouraged. The therapist is passive in this phase. In Phase Three, the actual modification and devvelopment of the new, more adaptive behaviors takes place. Systematic rational restructuring, modeling, problem solving, self control coping strategies, behavioral contingencies, and relaxation exercises are all employed, with the end result of improved behavior and social skills. Some of these will be used in the class of treatments for developing positive and neutral verbal statements and will be elaborated upon further in Chapter III. A look at Table 3 shows the general characteristics of cognitive, cognitive behavioral, and behavioral approaches.

One of the most valuable aspects of using a cognitive behavioral approach is that treatment generalization is incorporated directly into the program. The client's instructed focus on the maladaptive

Table 3

General Characteristics of Cognitive-Behavioral Interventions

	Treatment Target	Treatment Approach	Treatment Evaluation
BEHAVIORAL	Behavioral excesses or deficits	Behavioral "learning theory" interventions. Environmental manipulations (e.g., token economies, contingency management)	Observed changes in behavior with rigorous evaluation
	Behavioral excesses or deficits	Behavioral interventions. Skills training, information provision (e.g., modeling, role playing)	Observed changes in behavior with rigorous evaluation
	Behavioral and cognitive excesses and deficits	Broadly conceived behavioral and cognitive methods methodological rigor	Observed changes in behavior and in cognition with
COGNITIVE	Cognitive excesses or deficits	Cognitive interventions with adjunctive behavioral procedures	Examination of cognitive and, to a lesser extent, of behavioral changes
	Cognitive excesses or deficits	Semantic interventions	Changes in cognitions, "integrative changes"; often, but not always, nonempirically evaluated

Note: From Cognitive Behavior Interventions (p. 4), by P. Kendall and S. Hollon. 1979. Copyrighted 1979 by Academic Press. Reprinted by permission.

behavior and why not to use it makes them try to change and become
aware of the clues in the environment, such as the reaction of others,
that will remind them to act differently to each new situation
(Meichenbaum, 1976). It also insures a level of cooperation much
higher than in traditional behavior modification techniques. It has
been employed repeatedly and successfully to develop new social skills
in all age groups. How it does this, along with the actual specific
techniques that were used in this study, will be explained further in
the next chapter.

CHAPTER III

TOWARD A CLASS OF TREATMENTS FOR THE DEVELOPMENT
OF POSITIVE AND NEUTRAL STATEMENTS
ABOUT SELF, SCHOOL, HOME, FRIENDS AND FAMILY

In conducting cognitive behavioral studies, it is important to
start with a clear, specific behavior change plan and a detailed de-
scription of the treatment procedures (Hobbs, Moquin, Tyroler, Lahey,
1980; Watson and Tharp, 1977), otherwise, the study is not repro-
ducible and of little scientific value. This chapter will attempt to
give an explanation of the reasoning behind choosing each element that
will be included in a set of procedures used to develop positive and
neutral verbal statements in maladjusted adolescents about the topics
of self, school, home, family and friends.

The Operational Definition

The best way to start any treatment plan is to operationally
define the goal or target behavior. It seems that all behavioral
researchers have stressed the necessity of a clear operational defini-
tion, especially when dealing with human social behavior. They also
stress the importance of focusing on observable behaviors (Dustin and
George, 1977; Sulzer-Azaroff and Mayer, 1977; Spence, 1981; Rotter,
1954).

The use of operational definitions was slow to appear in per-
sonality studies and in most other aspects of clinical psychology

(Rotter, 1954). The rise of Behaviorism strengthened its value.
Without an operational definition, the interrater reliability of the
observable behaviors is poor and the baseline and experimental data
likely to be of little value to the researcher (Spence, 1981).

Not only does the working definition need to be stated in terms
of overt observable behavior, but it also needs to spell out the con-
ditions of measurement (Rotter, 1954) and break the behavior down into
measurable units (Sulzer-Azaroff and Mayer, 1977). This procedure is
most stringently followed at the behavioral end of the therapy con-
tinuum, including some of the more rigorous cognitive behaviorists.
Hobbs, Moquin, Tyroler, Lahey (1980) feel that some of the cognitive
behavioral researchers need to make considerable methodological im-
provements. They note the difficulty of evaluating program and
intervention effectiveness without clearly defined behaviors.

The discrete behaviors involved in making positive and neutral
statements will be part of the treatment in this study, but because
they are difficult to fully operationally define, they will not be
measured quantitatively.

The Rationale

The importance of a salient rationale to be given to a client is
influenced greatly by the work of the cognitive behaviorists of the
1970s (Meichenbaum, 1976; Goldfried and Merbaum, 1973; Goldfried,
1977). Rational restructuring, a cognitive behavioral approach, is

based on the premise that people's expectations and assumptions about the world around them have significant implications for their emotional reactions and behavioral response to that world (Goldfried and Goldfried, 1980). The first steps to implement this method would be to help the client recognize that their cognitions mediate their emotional responses. The next step would be to assist the client to recognize the irrationality of certain beliefs and to understand that unrealistic cognitions stimulate maladaptive behaviors. The last step would be to help the client change their unrealistic cognitions through behavioral techniques (Goldfried and Goldfried, 1980).

Often people become emotionally disturbed because they accept irrational ideas, and illogical bases for those ideas (Ellis, 1962). Therapy needs to persuade the client that their behaviors would be more productive and logically rational if they were changed (Ellis, 1962). Maladaptive patterns of learning often entail selective inattention or ignoring performance relevant stimuli and misperceptions or attending to the relevant stimuli but inaccurately labeling it (Mahoney, 1976). Bringing these disturbances and inaccuracies to the foreground through a rationale developed with statements drawn from the previous text would assist in making the client aware of their thoughts and behaviors, which would become a signaling cue to making the necessary behavioral change (Meichenbaum, 1976). The rationale strives to convince the client that behavior change is possible, constructive and in the power of each person to accomplish throughout their life (Dustin and Rickey, 1977). Including in the rationale a

discussion of the long term aversive consequences of the problem
behavior may also help insure cooperation with the interventions
(Kanfer, 1980).

When presenting a rationale, it is important to make sure the
communicator has credibility, good sense, is admired, dynamic and
warm. The message is best presented in an upswing moment or when the
client has just experienced something positive or pleasant. It should
be presented as a two-sided argument, with the side that is to be
accepted presented last. Emotional appeals can work as long as they
don't overwhelm or make the listening client anxious. It is also of
utmost importance to consider the client as an audience and to tailor
the message directly to them. Food or beverage can provide a good
distraction so that the message can be assimilated as smoothly as
possible. It is essential to get the client to say the message.
These guidelines for all kinds of attitude change were developed at
Yale University as part of the Yale Attitude Change Program (Johnson,
1980).

<div align="center">Self Management</div>

One of the problems of the early behavioral studies with human
subjects was that the behavior and behavior change was approached
externally. As the techniques developed and the skills of the behav-
iorists developed, self management formats became increasingly fash-
ionable (Sulzer-Azaroff and Mayer, 1977; Kanfer and Goldstein, 1980;

McFall, 1977). This format solved the ethical problems of external control by giving the client the ultimate self control over the behavior and the intervention procedures. Used alone or in conjunction with other methods, self management is a powerful technique that can result in systematic behavioral change (McFall, 1977).

In a self management format, the client is aware of the targeted behavior and a contract is developed to specify what is supposed to change and what will be the rewards or punishments involved. The right to discontinue the interventions is stressed during the contract development period.

Also emphasized is the client's responsibility for their own mental health. It facilitates the motivational process and teaches valuable self monitoring and evaluation skills (Kanfer and Goldstein, 1980). The problem of monitoring is resolved because the client has access to all of their own behavior.

There is evidence that students as young as second grade can effectively manage their own contingencies (Winnet and Winkler, 1972). Girls appear more responsive to self control and self management procedures than boys, and there seems to be some evidence that boys work better under external control conditions (Bandura and Perloff, 1973).

There is always the possibility of counter control, or an actual measurable decrease in a well rewarded behavior, with any behavior change methods. Adolescents, especially deviant ones, will occasionally act in direct opposition to the given contingencies. They seem to thrive on being unpredictable and uncontrollable (Mahoney, 1973).

Self management formats together with a cognitive behavioral rationale can moderate this oppositional counter control behavior.

In self management procedures, clients first set the goals for themselves. Then a monitoring system and a criteria level of performance is set. Next, the clients choose the reinforcements they will receive for meeting their criteria level of performance (Kanfer and Goldstein, 1980).

Many factors determine whether the client will be committed to execute a self control or self management program. See Table 4 for a list of the factors that influence a client's success or failure in self management procedures. A history of positive reinforcement for promise making, recent satiation, guilt, discomfort and fear of the action, escape from social disapproval, presence of others making promises, social pressure, and the possibility of receiving social approval for the promise made all seem to make commitment easier (Kanfer and Goldstein, 1980).

Factors that make commitment more difficult are the program beginning immediately, past failure to keep promises being punished, the target behavior perceived as not under the control of the client, the criteria for change and receiving the positive reinforcement for the problem behavior being set extremely high. A lack of support for planning a program and harsh consequences for nonachievement can also lead to a client's decision not to want to engage in the intervention procedures. A skilled helper is necessary to insure that these problems are minimized, especially when the client is not knowledgeable

Table 4

Factors That May Influence the Commitment
to Execute a Self-Control Program*

Commitment Easier	Commitment Difficult
1. Delayed program onset	1. Program begins immediately
2. History of positive Rf. promise-making	2. Past failure to keep promises was punished
3. Recent indulgence to satiation	3. Problematic behavior is not perceived to be under client's control--"can't be helped"
4. Guilt, discomfort and fear over action (aversive effects of response) is high	4. Positive reinforcement for problem behavior is high
5. Escape from social disapproval	5. Criteria for change too high
6. Presence of others making promises (modeling and social pressure)	6. Consequences of nonfulfillment are harsh
7. Behavior to be changed is private and cannot be easily checked	7. Behavior is publicly observable
8. Promise is vaguely phrased	8. Support for program planning is anticipated
9. Promise-making leads to social aspproval or immediate benefits	

*Expression of commitment does not guarantee execution of the program. Other factors, such as program requirements and reinforcement for execution in its early stages, determine fulfillment of a commitment after it is made.

Note: From Helping People Change (p. 341), by F. Kanfer and A. Goldstein, 1980. New York: Pergamon Press. Copyrighted 1980 by Pergamon Press. Reprinted by permission.

of cognitive behavioral or behavioral techniques.

A helper in self management procedures primarily performs three roles. They help the client establish the conditions that will favor the self control program and also provide the initial positive reinforcement to get the client motivated to change. Then they help the client learn specific behavioral techniques that will make the change possible and reinforce the client's efforts and successes for following a self management program (Kanfer, 1980). In essence, the helper assists the client observe their own behavior, either informally or formally; simply or complexly; objectively or subjectively; which ever seems more appropriate and natural and which ever will be the most conducive to change (McFall, 1977). They also help provide any booklets, checklists, counters, timers, or other measurement devices, or help the client set up some sort of record keeping that will enable a determination of whether the intervention, from baseline to post-experimental conditions, produced the change desired (McFall, 1977).

The helper can also help establish a behavior contract, in either a written or an oral form, that sets clear expectations, specifies performance, attainable goals, permits renegotiation, establishes rewards, and accents the development of positive behavior (Dustin and George, 1977). It should also be as unobstructive and simple as possible (Kanfer, 1980). The helper will also help determine the reinforcers that will inspire the client to achieve the behavioral goal and assist the client in choosing a reinforcement of their own.

Modeling

Many successful studies employ modeling for social skills development (Minkin, Braukmann, Minkin, Timbers, Timbers, Fixsen, Philips and Wolf, 1976; Sarason and Ganzer, 1969; O'Connor, 1972). Some theorists feel that modeling or the attempt to change behavior by showing the client a person successfully exhibiting the behavior is a most important application of a learning principle (Dustin and George, 1977) and that most competencies are acquired and perfected by exposure to example and then practiced and reinforced (Bandura, 1977). Imitation can help the person limit the range of their trial and error and enable them to perform perfectly on the first trial. It can be an effective method for teaching sympathy, cooperation, attitudes, and other social behaviors (Miller and Dollard, 1941).

Sex, race, and age of the model should be simlar to that of the client (Dustin and George, 1977; Sulzer-Azaroff and Mayer, 1977). Models should be competent, correct and prestigious. It also is advantageous to have several models rather than one (Goldstein, 1981; Sulzer-Azaroff and Mayer, 1977).

Modeling can be live, audiotaped, or videotaped, cartoon or real life characters (Dustin and George, 1977). A counselor can be the model, so can a 'reformed' person, although reformed persons can often display a negative attitude towards the client that will inhibit the positive effects of the modeling situation (Sarason, 1968). To be fully effective, models need to be friendly and helpful (Goldstein,

et al., 1981).

In general, there are four classes of persons who are imitated by others: those superior in age or grade, those superior in social status, those superior in intelligence, and those superior in technique (Miller and Dollard, 1941).

People behave much of the way they do because of prior modeling experiences. The juvenile delinquent or maladjusted individual is handicapped by a history of inadequate and unfortunate modeling experiences (Sarason and Ganzer, 1949). A good model is essential for the development of socially appropriate behavior. But in spite of its importance and necessity in social skills training, modeling alone is insufficient. The effects of modeling are not enduring without the additional methods of role play or rehearsal, performance feedback with incentives and adequate transfer or generalization training. Any program designed to change a social skill needs to encompass those features into its intervention procedures (Goldstein, et al., 1981).

Differential Reinforcement of Alternative Responses--ALT-R

The differential reinforcement of alternative responses is the systematic application of positive reinforcement to a behavior that is incompatible with an undesirable target behavior (Sulzer-Azaroff and Mayer, 1977). One study revealed that even the humanist counseling theorist Carl Rogers was reinforcing clients differentially by withholding attention and verbalizations and making them contingent

upon the nature of the client's responses (Truax, 1966). Since a
counselor's or therapist's differential reinforcment of a client's
responses seems inevitable, it is important to apply this reinforce-
ment knowledgeably and carefully.

The first step in the ALT-R technique is to identify the unwanted
behavior. Next, the alternatives that would reduce or completely
eliminate the probability of the undesirable behavior need to be
listed. It is best to select a behavior already in the client's
response repertoire and one that is likely to be maintained by the
natural environment (Sulzer-Azaroff and Mayer, 1977). If a promising
ALT-R response is not in the client's repertoire, the therapist can
use differential positive reinforcement, shaping, modeling and chain-
ing techniques to develop it. The therapist doing this type of skill
development should realize that the process of developing a construc-
tive alternative response will take longer when it is not a behavior
that the client already can perform successfully.

The advantages of the ALT-R is that it is a positive approach
which promotes the client's cooperation. It is a constructive method,
in that it builds a new desirable and adaptive behavior instead of
only eliminating a problem behavior. It has been shown to increase
positive self statements, which is especially relevant for its appli-
cation in the development of positive and neutral verbal statements.

ALT-R is the most effective when combined with other procedures,
such as extinction of the undesirable targeted behaviors. These com-
binations will reduce the disadvantage of its delayed effects or rela-

tive slowness in developing new behaviors. It is important to take good baseline data on both the undesirable behavior and the new behavior that will be developed in its place. This data will give the researcher knowledge about the program's effectiveness in eliminating the problem behavior and in developing the alternative to it.

Reisenger (1972) used ALT-R by positively reinforcing the emission of an appropriate low frequency behavior of smiling with depressives. This procedure significantly increased smiling and simultaneously decreased the undesirable crying behavior when combined with response cost for inappropriate crying behavior.

Thomas, Becker, and Armstrong (1968) effectively taught a teacher to use smiles and praise to positively reinforce her students for appropriate behavior. Significantly more appropriate behavior developed than when students were punished by negative comments. With punishment the effects are temporary and usually contingent upon stimulus conditions such as a certain teacher being in the room (Sulzer-Azaroff and Mayer, 1977).

Positive methods are very effective and much less damage is possible with their utilization. Approval or reward, withholding approval or reward and ignoring are all safer and have less side effects than open disapproval or threats of disapproval or punishment (Madsen and Madsen, 1974). Many theorists recommend these positive techniques (Watson and Tharp, 1977; Sulzer-Azaroff and Mayer, 1977; Goldfried and Merbaum, 1973; Bandura, 1977) and many practitioners are comfortable with them because of their constructive nature and lack of deleterious

side effects. Increasing neutral and positive statements by rein-
forcement while extinguishing negative statements through nonrein-
forcement should help to develop the new adaptive response.

Some Reasons Not to Use Punishment

Punishment or the application of an unpleasant consequence or
the withdrawal of a pleasant consequence that will result in decrease
in a behavior, although widely used, especially in school systems,
has many problems and complications in its application. There are
many side effects of such methods. Flight or fight activity, aggres-
sion, anger, modeling the punishing behavior, escape, avoidance be-
havior and vandalism all can arise when punishment is used (Sulzer-
Azaroff and Mayer, 1977; Goldstein, et al., 1981).

The most serious side effect for this particular behavioral ap-
plication is that its use increases negative self statements (Sulzer-
Azaroff and Mayer, 1977) and the task of trying to decrease negative
verbal statements and increase positive and neutral ones would be
made that much more difficult.

Also, punishment simply does not work well when used alone. The
effects are temporary and it never teaches new adaptive behavior. If
it must be used, the only technique that should be used is the loss
of positive reinforcement (Watson and Tharp, 1977) and then only in
conjunction with the ALT-R behavioral method to insure the development
of an appropriate new behavior.

The Importance of Practice Play and Feedback

Practice and the self corrective adjustments based on feedback are essential to learning new skills (Bandura, 1977a). Several studies support the gains and dramatic improvements made using behavioral rehearsal and role playing (Watson and Tharp, 1977; Kifer and Lewis, 1974).

Watson and Tharp (1977), Cautela (1967), and McFall and Lillesand (1971) found that even covert rehearsal, when coupled with modeling and feedback was capable of producing desirable behavioral change. Goldstein, et al. (1981) mentioned that the modeling technique is necessary but insufficient and the effects would not endure without some sort of role play, performance feedback and incentive positive reinforcement. They also noted that it was important to overlearn responses. This overlearning would insure that the client was comfortable and skillful in the response. This repetition would increase the chances of skill acquisition, retention and recall (Mahoney, 1973).

Krumboltz and Thoresen (1961) described role playing as dress rehearsal, which is best implemented by following with shaping and differential reinforcement. It is important to try and make these simulated situations as life-like as possible to promote generalization to the natural environment.

Role playing can be a part of practice or rehearsal. Although it is not synonymous with rehearsal, there is overlap. Role playing

encompasses the technique of taking on others' roles or having the clients be themselves in the situation they are enacting. Rehearsal or practice is usually defined more narrowly as working on the specific skill or behavior. The ability to role play increases with age (Piaget, 1950; Flavel, 1968). Retarded persons and emotionally disturbed persons have considerable difficulty with role play. Its ability is positively correlated with social competence (Little and Kendall, 1979). By early adolescence a person can usually take the role of a third person (Shantz, 1975). An element of role taking added to practice and feedback can increase an individual's understanding of the perspective of others (Chandler, 1973).

Practice making positive and neutral statements with feedback and positive reinforcement and initially taking the role of the person listening to exclusively negative statements may increase the client's desire to learn the new social skills and result in a higher success rate in learning the positive and neutral statement forms.

Relaxation

Relaxation therapy has been used successfully although rarely alone (Cautela, 1978). It has been extremely useful in providing the client with a means of self control over anger while other therapies and techniques work on the maladaptive beliefs, attitudes and behaviors that accompany this anger (Goldstein, et al., 1981).

Relaxation responses work to get a generalized decrease in sym-

pathetic nervous system activity and a subsequent increase in para-sympathetic activity (Benson, Beary, Carol, 1974).

The four basic elements are a mental device, such as a sound stimulus, word or phrase said silently or audibly or a fixed gazing at an object; a passive attitude, redirected as necessary when distracted; a decrease in muscle tone; and a quiet environment in which to perform the exercise, at least initially (Benson, et al., 1974).

Cautela (1978) included relaxation in his self control triad, along with thought stopping and covert positive reinforcement and recommended that relaxation exercises be done two times a day for approximately twenty minutes each period. Once relaxation is achievable at will, an anxiety hierarchy or a simulated situation can be presented, while the client tries to maintain relaxation (Dustin and George, 1977).

The author of this paper has found that an explanation or rationale for using relaxation techniques that works well with adolescents is that when the body is in the sympathetic state it is really only ready for fight or flight activities which are essential for dealing with emergencies but rarely necessary or adequate for dealing with administrators, law agencies, parents, or peers. Relaxation training provides a way into the parasympathetic nervous system, at will, which enables the individual to problem solve, think and become increasingly competent. It is included here, although not specifically used in this class of treatments, because it is an ongoing part of the school adjustment counseling by the experimenter.

Problems That Could Arise in Changing Behavior

Resistance to change is a major problem facing mental health personnel. It is important to realize that even when all methods are being applied systematically, negative attitudes and negative verbal statements may be supported by family, peers, reference groups, and the society and culture at large (Johnson, 1980). The peer group's influence can outweigh any influence the counselor has (Dustin and George, 1977).

Resistance is predictable and inevitable. The counselor or therapist working with adolescents should expect it and try methods that encourage cooperation such as a good rationale and a self management format. They should also let the client be thoroughly involved in the decision process and allow for free choice (Dustin and George, 1977). It is helpful, whenever possible, to include the client's social group in the change process (Bandura and Walters, 1963).

Self management formats and ALT-R techniques increase the chance that some level of cooperation will occur. Rationales, rational restructuring, role taking, as well as adequate positive reinforcement will also increase cooperation.

Generalization is built into the cognitive behavioral technique of rational restructuring and its likelihood increased by practice in real life or near real life situations. Teaching generalizable rules of conduct will also help the client learn to generalize from training to real life (Goldstein, et al., 1981).

Maintenance is best developed by first choosing a behavior likely to be maintained by the natural environment and then by overlearning the new skill (Watson and Tharp, 1977; Dustin and George, 1977). Carefully fading from artificial reinforcers to more natural ones and building increasingly lower intermittent reinforcements schedules into a program also encourage maintenance (Sulzer-Azaroff and Mayer, 1977). The development of intrinsic motivation is also important. This is done by reducing the density of reinforcement. If these safeguards are built into the initial intervention, resistance to change, social skill generalization and maintenance are likely to occur.

Conclusion

This review of the reasoning behind the use of each of the described techniques shows the importance of including each into a class of treatments that is used in the study designed to develop positive and neutral verbal statements in maladjusted adolescents.

As can be seen in Table 5, many of the studies cited advocated the use of at least some of the prescribed components of this class of treatments in their development of specific social skills. Some studies, such as that by Thomas, Becker and Armstrong (1968) used all of the components, while others, such as Polirstok and Greer (1977), Cooke and Apolloni (1976), and Bornstein, Bellack, Hersen (1977) used more than 90% of the recommended procedures. All of the studies made some attempt at an operational definition of the problem behavior to

Table 5

A Comparison of the Cited Studies on the Prescribed Class of Treatments

Study and Date	Sample Studied	Operational Definition	Self Management	Instructional Rationale	Rehearsal	Feedback	No Use of Punishment
Spence, 1981	70 convicted adolescent males	+					
Minkin, et al., 1976	4 juvenile delinquent females	+	o	+	+	+	+
Oden and Asher, 1977	12 school age social isolates	+	o	+	+	+	+
Maloney, et al., 1976	4 adolescent youth offenders	+	o	o	+	+	+
Bornstein, et al., 1977	4 school age unassertive children	+	o	+	+	+	+
Kifer and Lewis, 1974	3 parent/child prs. of youth offenders	+	o	+	+	+	+
Rogers-Warren and Baer, 1976	32 preschoolers	+	o	o	o	o	+
Polirstok and Greer, 1977	1 female 8th grade behavior problem	+	o	+	+	+	+
Cooke and Apolloni, 1976	4 L.D. school age children	+	o	+	+	+	+
Strain and Timm, 1974	1 beh. disturbed preschool male	+	o	o	o	+	+
Thomas, et al., 1968	28 school age children and teacher	+	+	+	+	+	+
Reisenger, 1972	1 20 year old depression	+	o	o	o	+	+

Table 5, continued

Study and Date	Sample Studied	ALT-R	Modeling	Followup	Maintenance	Generalization	Reliability	Social Validity
Spence, 1981	70 convicted adolescent males						+	+
Minkin, et al., 1976	4 juvenile delinquent females	+	+	o	o	o	+	+
Oden and Asher, 1977	12 school age social isolates	+	+	+	o	o	+	+
Maloney, et al., 1976	4 adolescent youth offenders	+	o	o	o	o	+	+
Bornstein, et al., 1977	4 school age unassertive children	+	+	+	+	+	o	+
Kifer and Lewis, 1974	3 parent/child prs. of youth offenders	+	o	o	o	+	+	+
Rogers-Warren and Baer, 1976	32 preschoolers	+	+	o	o	+	+	+
Polirstok and Greer, 1977	1 female 8th grade behavior problem	+	+	+	+	+	+	+
Cooke and Apolloni, 1976	4 L.D. school age children	+	+	+	+	+	+	+
Strain and Timm, 1974	1 beh. disturbed preschool male	+	o	o	o	o	+	+
Thomas, et al., 1968	28 school age children and teacher	+	+	+	+	+	+	+
Reisenger, 1972	1 20 year old depression	+	o	+	+	+	-	o

Notes: + = study covered; o = study did not cover and could have; blank = unnecessary for type of study

be eliminated or the social skill to be developed. All of the studies

made significant attempts to develop a socially appropriate alterna-

tive behavior instead of focusing on and merely eliminating inappro-

priate maladaptive behaviors. Reliability was also very carefully

attended to in these sample studies. One area of deficiency seemed

to be in the self management approach. Perhaps the studies of the

1980s and the trend toward self management and self control in behav-

iorism and cognitive behaviorism will result in a rise in the use of

this important and valuable method of social skill development.

The end result of this overview will be presented next in the

following chapter when we describe the procedures of the human subject

study to determine the effects of such social skills training with

maladjusted adolescents.

Hopefully, this intervention will be of significant value to the

maladjusted adolescent by teaching new constructive social skills and

setting the stage for a more general positive attitude towards life

and perhaps even foster their increased mental health, as some of the

research suggests.

C H A P T E R   I V

METHODOLOGY AND DATA ANALYSIS

Method

Hypotheses of the study

This dissertation hypothesized that subjects who were treated by
a school adjustment counselor would show significantly less school
detentions and that teachers, parents, and administrators would rate
them higher on two school behavior rating scales. Classmates in
their vocational classes would rate these subjects higher on social
desirability after treatment than prior to it. The subjects would
also report feeling happier and mentally healthier after treatment.
In addition, more general attitudes would be affected, as demonstrated
by a higher score on an Evaluation factor of the Semantic Differential
on three treatment centered topics: School, Self, and Friends; and
the nontreatment topic, Home.

These changes would be retained and evidence of maintenance would
be found in the follow-up work done four weeks later. Specifically,
after treatment, the experimental subjects would, when compared with
the control subjects:

Hypothesis I. Show a lower score by 1.0 on the Evaluation Seman-
tic Differential factor about Self, School, Friends than during the
two baseline periods, Y1 and Y2.

Hypothesis II. Show a lower score by 1.0 on the Semantic Differ-

ential focusing on untreated topic of Home than during the baseline periods, Y1 and Y2.

The Semantic Differential (SD), described later in the measures section, provided a measure of whether the student's attitudes have changed before and after the treatment procedures. There is evidence that a change in behavior can affect a more general attitude change. A lower score represented a more positive evaluation.

Hypothesis III. Get less detentions per days of school in session after the treatment than during the baseline periods, Y1 and Y2.

It was predicted that students who were treated with this set of procedures would be involved in less mutually aversive reactions with teachers and administrators and that this would result in less detentions.

Hypothesis IV. Have teachers, and school administrators rate them higher on a short graphic rating scale devised by the evaluator to measure perceptions about the students in areas that relate to school success than during the two baseline periods, Y1 and Y2.

These areas included cooperation, rapport, positive attitudes, and the degree to which they accepted the consequences of their own behavior.

Hypothesis V. Be scored higher after treatment on the Hahnemann High School Behavior Rating Scale (HHSB) by their vocational class teachers than during the baseline periods, Y1 and Y2.

Hypothesis VI. Have students in their vocational classes rate them higher on social attraction after treatment than during the base-

line periods, Y1 and Y2, as evidenced by an increase in the experimental subject chosen in response to two questions, "With whom would you most like to spend morning and afternoon break?" and "With whom would you most like to work on an assigned project?".

Hypothesis VII. Score themselves higher on a seven-point mental health and happiness scale after treatment than during the baseline periods, Y1 and Y2.

It was also assumed that subjects would report feeling mentally healthier and happier with a subsequent decrease in the preponderance of negative attitudes about home, school, self, and friends and an increase in positive and neutral ones.

Subjects

Ten students from an area vocational technical high school were selected. The experimenter, a school adjustment counselor within the system, gave each of the teachers and administrators within that system a list of her current counseling clients.

There were approximately 430 students in that school system, approximately 100 of which had 502.1 to 502.3 special needs prototypes under Public Law 91:142. (Prototype 502.1 represents students receiving up to 25% of their services in a special service setting, and 502.3 represents up to 60% of the classes being in special settings.)

Of these 100 special needs students, approximately 50 received school adjustment counseling on a regular weekly basis. This prior counseling relationship with both experimental and control subjects

with the same counselor should have minimized the Hawthorne Effect. It must be noted that special needs populations may be more prone to negative verbalizations than other populations of students.

The teachers were told that the counselor was working on developing a treatment procedure that might be able to help students improve their social behavior and general attitudes. It was also explained that many of the students on the list had no problem with negative verbal or social behaviors but a few might have such problems. Then each staff member was asked to check those students that they felt might benefit, especially those that they felt displayed negativity that seriously interfered with social, academic, or vocational success. Final selection, if more than ten students were named by the teachers, would have been made randomly had not twelve students each received four or five teacher nominations compared to all the other students named, who only received one or two nominations apiece. Two students were eliminated because they were enrolled in a vocational area that necessitated their absence from many treatment sessions. Determinations as to whether each subject would be control or experimental were made at random.

Formal parental consent for participation in this study was obtained before treatment commenced. (See Appendix A for a copy of the consent form used.)

A short educational case history of each subject selected and who participated in this study was obtained to assist in understanding the subjects' special needs and to provide the reader with descriptive

data necessary to make generalizations to other populations.

Experimental Subject One was a sixteen-year-old freshman boy with a history of poor peer relationships and extreme difficulties with authority. His relationship with his mother was very poor. He had a very low frustration and anger level.

He had low average verbal skills and average performance scores on WISC tests. He was reading at grade level. He received vocational counseling and academic assistance. His special needs prototype was 502.2.

Experimental Subject Two was a seventeen-year-old junior boy with a history of severe substance abuse. His poor attendance resulted in a school failure despite above average intelligence. He was referred to special needs for counseling after that year. His special needs prototype was 502.2.

Experimental Subject Three was a sixteen-year-old freshman girl who had lived in a group home until she was fourteen. She was then adopted by an elderly widow.

Her educational and social skills were all below age level, but they rose steadily and rapidly since her adoption. She received help in all her academic and vocational areas and had a special needs prototype of 502.3.

Experimental Subject Four was a seventeen-year-old junior boy from a French Canadian family. French was the primary language in the home and there were noted language and reading difficulties with all of his brothers. He had extremely low basic skills tests scores

and had been considered a major behavior problem in school. He received assistance in several academic classes. His special needs prototype was 502.2.

Experimental Subject Five was a sixteen-year-old junior boy, originally seen for special needs for extreme acting out and challenging of authority while he was still in grade school. He had continued to be disruptive at his vocational high school and reached the maximum amount of suspensions during his freshman and sophomore year. His problem behavior escalated each springtime.

He did have language delays as a child and his writing skills were still below grade level. His special needs prototype was 502.2.

Control Subject One was a seventeen-year-old sophomore boy with above-average intelligence. A noted underachiever, he had failed eighth grade two times before getting special needs assistance. He had a difficult relationship with his father and with authority figures in general. He reached the maximum level of suspensions during his freshman year. He had a special needs prototype of 502.2.

Control Subject Two was a fourteen-year-old freshman girl characterized by depression, a low self image and very poor peer relationships. She was overweight and felt unwanted by her family and peers. Her special needs prototype was 502.2.

Control Subject Three was a sixteen-year-old junior boy who had a long history of difficulty accepting and complying with school rules. He had above-average intelligence and no learning disabilities. He did have an extremely poor relationship with his stepfather.

His special needs prototype was 502.2.

Control Subject Four was a fifteen-year-old sophomore boy who failed that year despite assistance from special needs in all academic areas. He had failed all of his basic skills tests. His absenteeism and his low academic skills contributed to his failure. His special needs prototype was 502.3.

Control Subject Five was an eighteen-year-old junior boy with a very complicated background. His natural mother was schizophrenic, his father abusive. He was removed from that home when he was seven and had lived in various foster homes until he was adopted three years ago by an elderly couple.

He struggled to stay integrated within the boundaries of reality and to comply with social and school rules. He did have paranoid tendencies and was extremely alienated from his peer group. He received assistance in the resource room whenever social problems in a class necessitated that remediation. He had no specific learning disabilities. His special needs prototype was 502.3.

Setting and description of the researcher

A regional vocational technical high school in the Northeast, U.S.A. was the setting for this study. There are approximately 430 students and 60 teachers at this alternative high school. This school offers its students a wide selection of vocational careers to special- ize in during their enrollment. These careers are automotive, agri- business, carpentry, clothing, computer science, cosmetology, culinary

arts, drafting, electronics, electricity, and machine shops.

Counseling is available upon request by the student by three guidance counselors. In addition, there is a school adjustment counselor to provide counseling to those students within the system that have Public Law 94-142 educational plans that require it.

The school adjustment counselor is also this study's researcher. She has a B.A. in Psychology and in Sociology, a M.Ed. in Special Education, and at the time of the study was working towards her Ed.D. in School and Consulting Psychology. She holds certification as a school psychologist, and as an elementary education teacher. She also holds provisions as a special education teacher and as a school adjustment counselor.

She is responsible for counseling approximately 50 students on a regular basis and for providing other special education students with counseling upon request.

Prior to counseling at this school she was a special education teacher with an area alternative education program that serviced learning disabled, emotionally and behaviorally disturbed students.

She is 34 years old, 5'6", and weighs 115 pounds. Her hobbies include horseback riding and showing, dancing, skiing, hiking and skating. Her rapport with her clients is evaluated as "excellent" by her employers.

Students can also opt to join any of the full range of boys' and girls' athletic programs. The school is an optional high school and the students can return to their local high school at any time.

The primary areas utilized in this study were an 8' x 10' coun-
seling office and the school cafeteria, although baseline and experi-
mental data were obtained in the students' vocational and academic
classes during the school day.

Measures

The following measures were used to assess the effectiveness of
the specific treatment procedures developed. They are included in
Appendix B--Measures.

    (1)   The number of detentions per days of school in session,
         expressed as a percentage.

    (2)   An experimenter-devised graphic rating scale to be given to
         administrators, parents, and teachers to assess student's
         cooperation level, rapport with teachers, parents, and
         friends, and acceptance of the consequences of their own
         behavior. (See Measures Form 1.)

    (3)   The Hahnemann High School Behavior Rating Scale (HHSB).
         (See Measures Form 2.)

    (4)   Sociometric measures of the students' social attractiveness
         in each subject's vocational classes. (See Measures Form 3.)

    (5)   An experimenter-devised self rating scale to measure the
         subjects' level of happiness and perceived mental health.
         (See Measures Form 4.)

    (6)   Semantic Differential evaluation factor scores for all four
         concepts studied: Home, Friends, Self, and School. (See

Measures Form 5.)

All measures were signed and dated by the person filing them to minimize experimenter contamination in this study. These signed and dated measures are available from the researcher.

School detentions

The number of detentions expressed as a percentage representing the number of detentions per days of school in session was used because it was predicted to be more sensitive to variations in behavior than a count for any particular school week or month. This detention data was available through the review of the detentions received daily by all of the students in the school. Detentions are given for specific infractions listed in the Student Handbook 1984-1985. The rate of detentions is a good indicator of the number of mutually aversive reactions the student has. Some examples of detention infractions are excessive tardiness, wandering halls without a pass, cutting a class, noncompliance with a teacher, and disturbing the classroom.

An experimenter-devised graphic rating scale of cooperation, rapport, positive behavior and acceptance of the consequences of their own behavior

This scale was given to adminstrators and teachers. It was used primarily to measure the social effectiveness of the treatment procedures. If the administration and teachers perceived positive changes in the students' cooperation, constructiveness, rapport and acceptance

of consequences, the treatment would be at least partially effective and valid from a social perspective.

The graphic rating scale is a behavioral observation method for assessing remembered behavior. It is considered by some researchers and experts in the field (Kerlinger, 1964) to be the most effective rating scale available.

In the graphic rating scale used, lines were combined with descriptive phrases. They set a continuum in the mind of the person answering them and they were clear, quick and easy to use and understand; a decided bonus when they were presented to overtaxed parents, teachers, and administrators.

Some of the problems of this measurement device were the error of severity or tendency to rate subjects too low, the error of leniency or the tendency to rate subjects too high, and the error of central tendency or the tendency to avoid extremes in the rating of subjects. Despite these problems, rating scales were extremely valuable for this research because they were quick and provided interesting results, especially when supplemented with other instruments and measures (Kerlinger, 1964).

The Hahnemann High School Behavior Rating Scale (HHSB)

This measure of achievement-related classroom behavior was developed by George Spivack and Marshall Swift at the Hahnemann Community Mental Health Center in Philadelphia. It was designed specifically to measure overt behavior that reflects the students' overall

adaptation to the demands of the classroom setting and their subsequent classroom achievements. Thirteen factors had been identified within this test using factor analysis.

Five of the thirteen factors relate positively to academic success. The most relevant for this study were verbal interaction (positive verbal involvement in class discussion) and rapport (friendliness and responsibility) when interacting with the teacher. Eight factors related negatively to success in the classroom. Those relevant to this study were quiet-withdrawn (the degree the student lacks social interaction) and verbal negativism (the degree of negative, critical verbal behavior demonstrated in the classroom) and expressed inability (the degree to which the student feels he is incapable of doing the work assigned).

The original factor analytic studies on 882 suburban and subsequent studies on 602 urban seventh to twelfth grade students revealed significant and consistent relationships between factor scores and teacher grades, independent of the student's I.Q. were considered as evidence of high validity. Unfortunately, test retest reliability data was not yet available, but should be soon.

Sociometric indices

Sociometric indices in each subject's vocational class were used to determine the answers to two questions: (1) With whom would you most like to work, and (2) With whom would you most like to spend you morning and afternoon breaks?

Sociometry is a simple, economical and naturalistic method to determine whether the treatment appears to effect the social attraction and choice of each subject by their peers. If improvement was made in social attraction and choice, there would be more opportunities for future interaction, thus providing the maladjusted adolescent the opportunity to develop new, more effective social skills that many of these students lack. The index used was:

$$CSj = \frac{Ecj}{n - 1}$$

where CSj is equal to the choice status of Person j; the Ecj is equal to the sum of choices in column j; and n is equal to the number of individuals in the groups (Kerlinger, 1964).

Experimenter-devised self rating scale of mental health and happiness

The basic strengths and weaknesses of this device were similar to those presented in the previously described graphic rating scale. This seven-point numerical rating was chosen as possibly more sensitive to change. It was projected that the subjects would view themselves as mentally healthier and happier after treatment and during the maintenance period than during the baseline period.

The Semantic Differential Scale (SD)

This method was devised by Osgood, Suci, and Tannebaum (1957) to measure the connotative meaning of concepts as points in semantic

space.

It was constructed of a number of scales or bipolar adjective pairs. These pairs are usually represented as a seven-point rating scale. There are at least three factors that can be tapped by these methods: Evaluation, Potency, and Activity. Only the Evaluation factor was assessed in this study because of the nature of the information sought and that it was by far the most powerful and trustworthy of the three scales. It explained twice as much variance as the next most powerful scale, and four times as much variance as the next most powerful scale.

The concepts chose for use with the SD are the treatment-focused concepts of Self, School, and Friends and the untreated topic of Home.

After the concepts were chosen and the evaluative adjective pairs decided upon, item reversals were made at random so that the subject could not anticipate the direction desired by the experimenter.

This study predicted that subjects would get a lower factor score or a lower mean on the adjective pairs of the evaluation factor for each concept studied.

Item test-retest reliability coefficients of .85 were reported for the individual adjective pairs within the test (Osgood, et al., 1957).

A change in a factor score of more than 1.00 for the evaluation factor was considered significant at the .05 level (Osgood, et al., 1957), although this was only one possible guideline. Statistical significance can also be determined by the magnitude of the changes

and the variance in the experimental subjects' scores as compared to the control subjects'.

Design

Kerlinger's (1964) design 19.8, a longitudinal time design, was employed in this study.

(Experimental Treatment)	Y1	Y2	x	Y(3a)	Y(3b)	Y4
(Control)	Y1	Y2	$\sim$x	Y(3a)	Y(3b)	Y4

Where Y1 and Y2 were baseline periods, x was the treatment intervention, $\sim$x was nontreatment, Y(3a) was a midtreatment measure, and Y(3b) was the post experimental measurement period. Y4 was the follow-up measurement taken.

This design controlled for maturation and history. The addition of control subjects to this design provided additional information with which to assess the effectiveness of the treatment procedures versus ongoing school counseling.

Procedure

Preliminary.

(1) The following materials were assembled before the beginning of treatment.

(a) A treatment rationale with a section allotted to include each subject's own baseline data.

(b) A semantic differential centered on the evaluation fac-
     tor for the topics of Home, Self, School, and Friends.

(c) An experimenter-devised self rating scale for deter-
     mining each subject's level of happiness and mental
     health.

(d) Tape recordings of several popular students making
     positive and neutral verbal statements about school,
     self and friends.

(e) A sociometric questionnaire to administer to each of
     the subject's vocational classmates.

(f) An experimenter-devised graphic rating scale for ad-
     ministrators, parents, and teachers on each participant
     during baseline, experimental, and follow-up periods.

(g) The Hahnemann High School Behavior Rating Scale (HHSB).

(h) A consent form to be obtained for each subject prior
     to actual treatment and inclusion within the writeup
     of this study.

(i) A list of school adjustment counseled students to pre-
     sent to the teaching staff.

(2) A sample was drawn as described previously.

Time line for measures and treatment procedures

Week	Session	Description
February 1-4	**	Finalized proposal.
March 1	**	Y1 baseline.

Week	Session	Description
March 4	1	Y2 baseline--treatment begun after baseline.
April 1	2	
April 2	3	
April 3	**	No session--vacation.
April 4	4	Y(3a) midtreatment assessment, both control and experimental subjects.
May 1	5	
May 2	6	
May 3	7	Y(3b) post treatment assessment, both control and experimental subjects.
May 4	M-8	Maintenance begins.
June 1	M-9	
June 2	M-10	Y4 maintenance assessment.

Baseline periods Y1 and Y2

(1) All measures were taken in two baseline periods four weeks apart. The first baseline period Y1 was taken during the last week of February. Data for baseline period Y2 was taken during the third week of March.

(2) An individualized rationale was developed using the baseline data collected during baseline Y1, and the standard rationale given in Appendix C.

(3) Written permission for participating in this study was obtained prior to any treatment.

Treatment procedures

The actual treatment commenced during the fourth week of March.

Session 1

Part A. Subjects were instructed to "talk about the topics of School, Self, and Friends into a tape recorder for a total of ten minutes."

Part B. Next, a formal rationale was presented to each subject. A copy of this rationale outline can be seen in Appendix C. This outline was only used as a guide. Actual wording was made at the individual's level of understanding. They also were told the results of their baseline data at this time.

Part C. During part of the initial session there was an introduction to the self management format. Each subject was told, "each week you will practice and receive feedback for positive and neutral verbal statments about Self, School, and Friends for a total of ten minutes during each weekly session." It was explained that "a tape recorder will be used to facilitate recording the statements." The definitions of the positive, neutral, and negative statements as they appear in the 'definition of terms' section were given. The subjects then listened to tape recordings or examples of all three behaviors (see Appendix E). They were told, "you will receive positive social reinforcement for each neutral and positive verbal statement that you make in these sessions." It was explained that if "you increase the number of positive and neutral statements you make each week, you will

be allowed to go to the cafeteria or stay in the office and have cof-
fee, hot chocolate, and/or donuts at my experimenter's expense. You
will also be allowed to go have a cigarette break. At the end of the
seven weeks we will determine if your decrease met your criteria to
receive a tee shirt of your favorite rock band."

The subjects practiced taking data by listening to the recording
of their statements about the three treatment topics on the self man-
agement sheets given in Appendix D. A "+" indicated a positive state-
ment, a "0" indicated a neutral statement, and a "-" indicated a nega-
tive statement. They were told, "you will receive identical rein-
forcement for neutral and positive, but you will not receive reward
for negative statements when it is your turn to make verbal state-
ments about topics." Subjects were encouraged to ask questions at
this time.

Note: Parts D and E were only explained during Session 1. Dur-
ing subsequent treatment sessions they actually occurred.

Part D. Subjects were requested to "talk for ten minutes about
the same three topics: SELF, SCHOOL, and FRIENDS" that they were
initially instructed to speak about in Part A. This was recorded.
They were reminded to try to make more positive and neutral statements
than before. They then took a count of the positive, neutral and
negative statements that they made during the ten-minute session and
determined whether or not improvement was made. Decreases in negative
verbal statements were also intensely socially praised by saying "that
is great that you made less negative statements." They were also told

that they would be given assistance in rephrasing all negative state-
ments into more neutral ones (e.g., "I hate my teacher" rephrased to
"I get angry sometimes at my teacher").

When improvements were made, they were reinforced as described
in Part C. During this reinforcement period, the subjects were en-
couraged to talk about any topic that they chose (e.g., boyfriends,
girlfriends, music, parties, or movies). They were also given a pass
to go have a cigarette break if they were smokers. They could sit
with friends, if they preferred, during this period, although none
chose to do so.

Part E. They were told by the counselor/researcher that "prac-
ticing these skills out of the sessions would probably increase the
likelihood that during the actual sessions there would be an increase
in the numbers of desired positive and neutral statements." They were
told, "you will receive a rock tee-shirt of your choice at the end of
the eight weeks of actual treatment if you increase the number of
positive and neutral statements to a mutually agreed-upon number of
statements based on the baseline number of statements."

Note: Because of the difficulty of operationally defining posi-
tive, neutral, and negative verbal statements, these numbers were con-
sidered an essential part of the treatment procedures, not a quantita-
tive measure. They are reported, with adequate reservation, in the
results section of this paper.

Sessions 2-7. The subjects first listened to short tape record-
ings of high prestige models making the positive and neutral state-

ments at the onset of each session (see Appendix E for a transcript of these tapes). During these treatment weeks, the same practice and feedback exercises, coupled with the differential reinforcement of alternative responses described to the subject during Session 1, Part D and Part E, were implemented. They all received social reinforcement for reports that they were practicing these techniques outside of the counseling sessions. The researcher smiled and said, "It will really help you to practice outside of your weekly sessions." Measures Y(3a) were taken prior to the actual treatment procedures in Session 4. Post treatment data Y(3b) were taken at the end of Session 7.

Maintenance period procedures

Session 8. This session began the maintenance training. All data was shared with each subject during this session. Determination of whether the subject met their criteria increase in the number of positive and neutral statements was made and the award of the rock tee-shirt occurred at this time. No actual practice sessions were held, but encouragement was given for continued reports of practicing this skill in other areas.

Session 9. Included more discussion on successes that they had met in other areas and whether they were still practicing these skills in other areas. They were told at this time that the original baseline data would again be compiled before the end of the year.

Session 10. There was no discussion of the topics of positive

and neutral statements or negative statements unless the subject initiated the topic during the usual school adjustment session. Measures Y4 were taken at the end of this period.

Session 11. All the data was shared with the client. If there had been maintenance of the gains on the social measures, the subject received another tee-shirt for continuation with the work towards self improvement. They also received substantial social reinforcement and coffee, hot chocolate and donut breaks plus the cigarette passes they received for increases during the treatment sessions.

Non treatment procedures for control subjects

Control subjects received no treatment other than their usual weekly counseling session specified by their individualized educational plans. All measures were taken during each data period, Y1, Y2, Y3a, Y3b, and Y4.

C H A P T E R   V

RESULTS

Hypothesis III

The most significant area of improvement of the experimental sub-
jects after treatment was seen in their lowered detention and suspen-
sion rates. The subjects who were treated received less detentions
per days of school in session after treatment than during the baseline
periods Y1 and Y2, which supports Hypothesis III. (This hypothesis
was presented first in the results because of its ultimate social rel-
evance to the maladjusted adolescent. It also had the most reliable
and possibly the most valid measure included.) This decrease can be
seen in four of the five experimental subjects with the initiation of
treatment (refer to Figures 1.0 through 1.3). Three of the sub-
jects maintained this decrease in detentions throughout the remainder
of the school year into the maintenance period (refer to Figures 1.0,
1.1, and 1.2). These three subjects had no more detentions at all.

Experimental Subject Five (refer to Figure 1.4) seems to be the
only unimproved subject if a lowered detention rate was the estab-
lished criteria for improvement. It should be noted, however, that
although this subject's detention rate actually increased by the end
of the school year, in the previous two years in the system, this sub-
ject had received the maximum number of suspensions during the last
few months of school. In the previous school year, he had been re-

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Figure 1.0.   Percentage of Detentions per School Days in Session for
               Experimental Subject 1
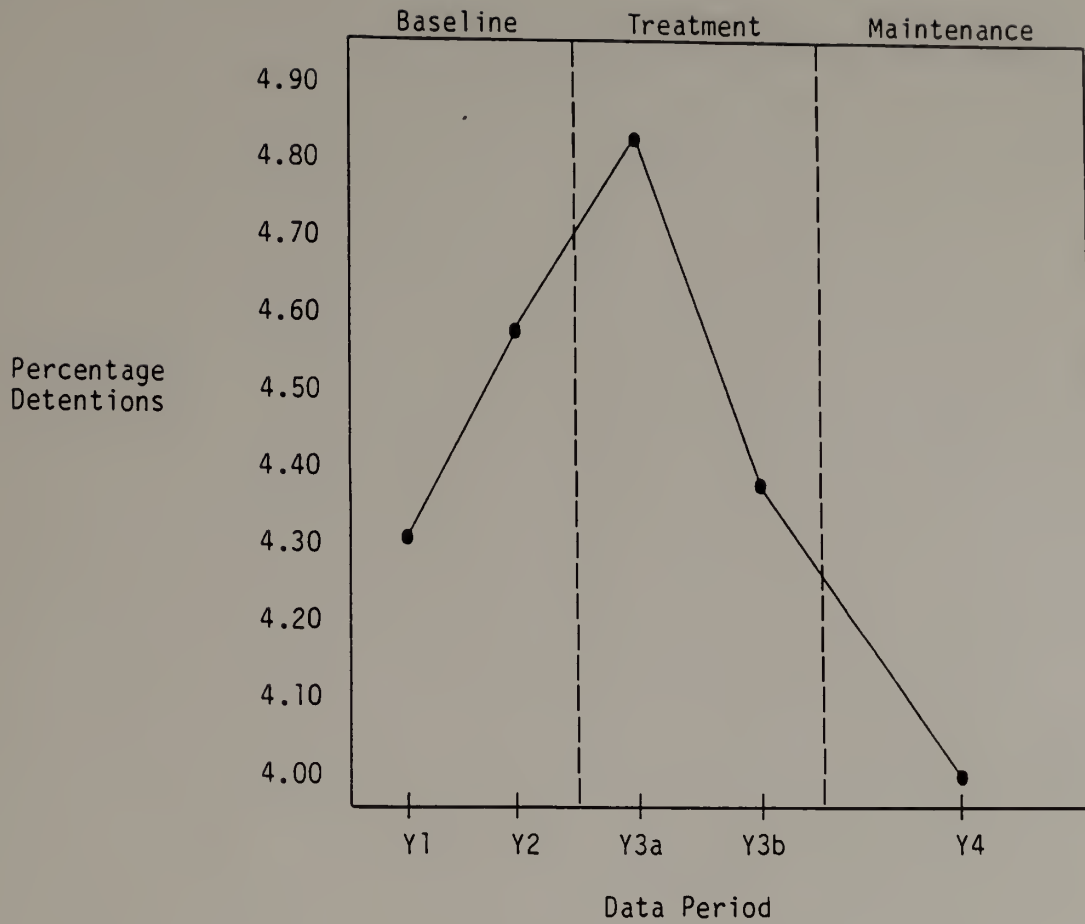
Figure 1.1. Percentage of Detentions per School Days in Session for
            Experimental Subject 2
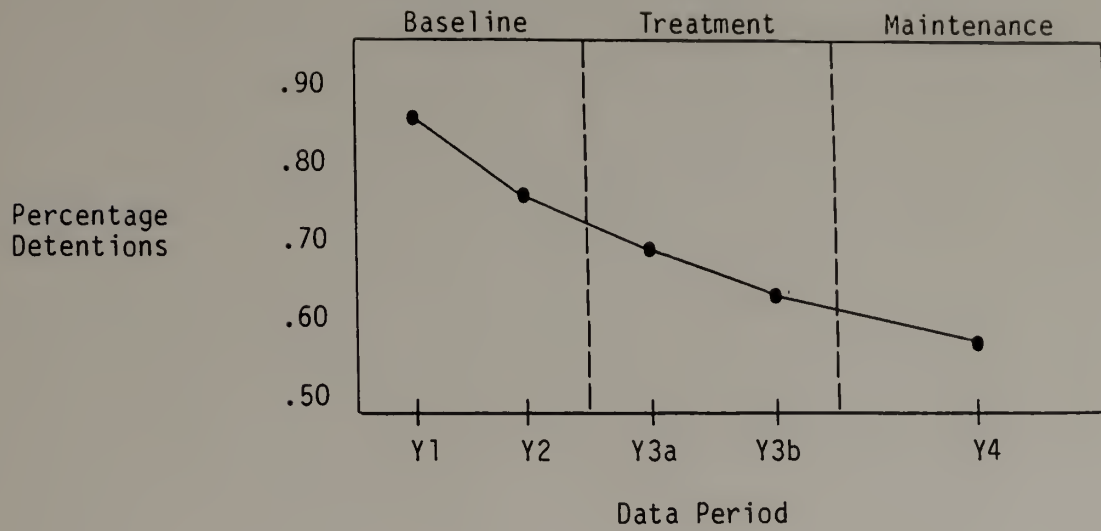
Figure 1.2.   Percentage of Detentions per School Days in Session for
Experimental Subject 3
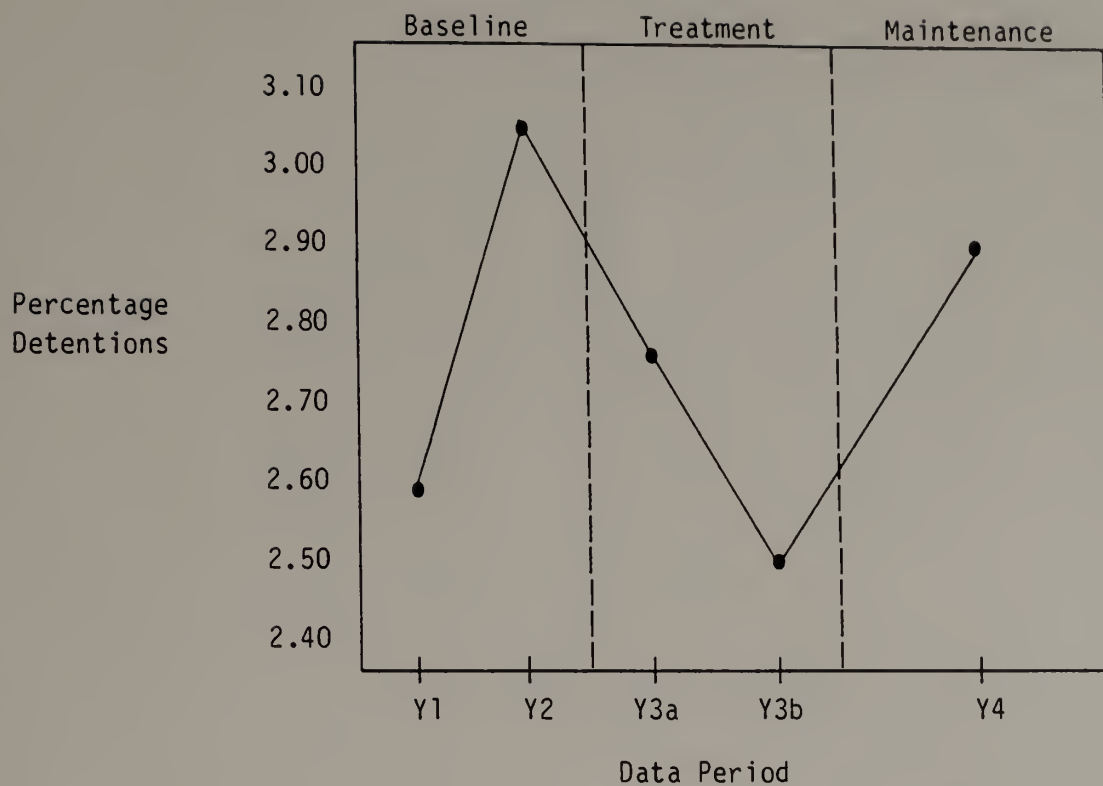
Figure 1.3.   Percentage of Detentions per School Days in Session for
              Experimental Subject 4
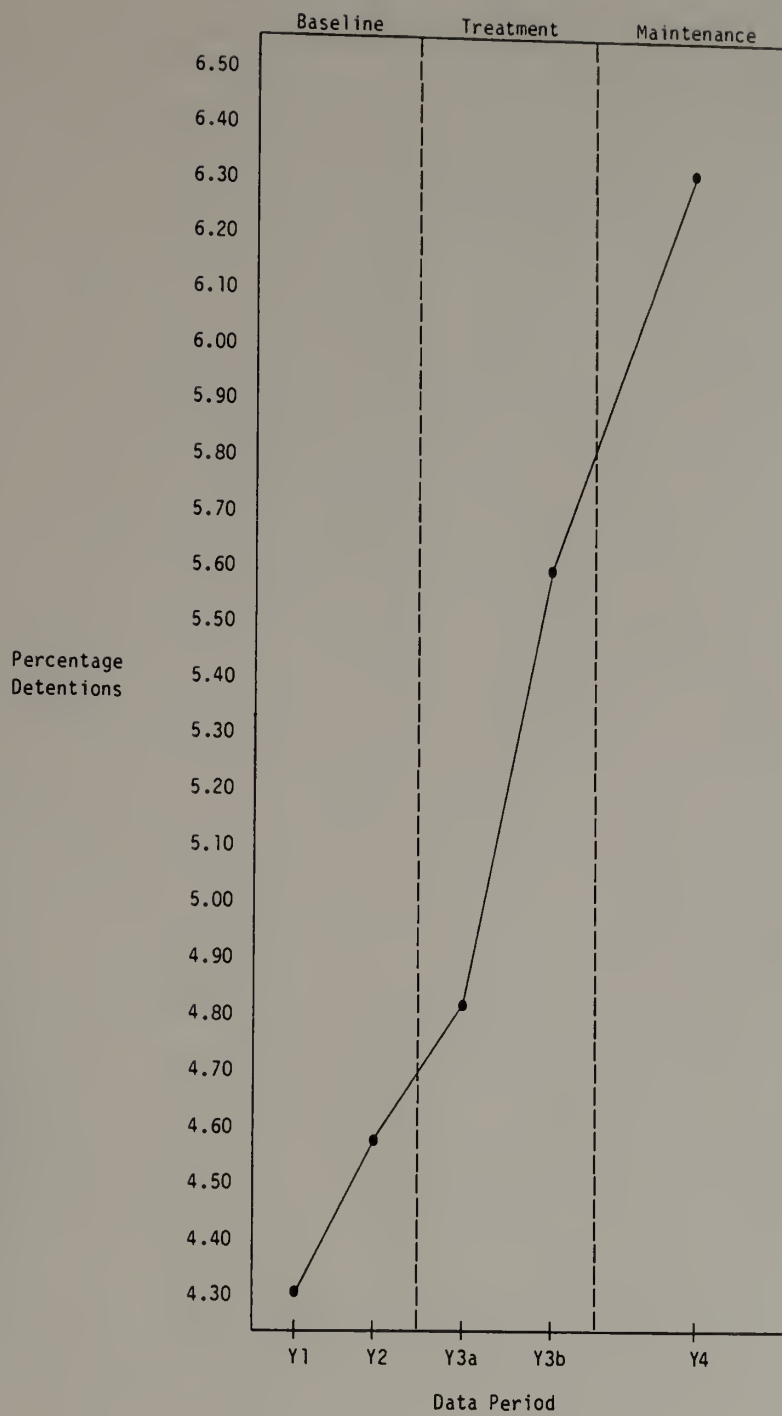
Figure 1.4. Percentage of Detentions per School Days in Session for Experimental Subject 5

viewed by the school administration, special needs department and the
school committee to determine the possibility of a permanent expul-
sion. In the perspective of his previous spring term misbehavior,
Experimental Subject Five had an extremely successful last term. In
fact, no experimental subject received any more suspensions after
treatment began.

Experimental Subject Four, represented in Figure 1.3, did not
maintain his achieved decrease in detention rate.

It should be noted that this subject was male, older than the
other students and less intelligent than the other students in this
study. Those factors have been discussed previously as potentially
having an adverse affect on their ability to change their attitudes.

In Figures 2.0 through 2.4 there were, as expected, much less
evident trends. None of the control subjects had decreased to zero
detentions. Nor was there any absence of further suspensions for the
control subjects, as was apparent with the experimental subjects. In
Figures 2.0 and 2.1, Control Subjects One and Two actually increased
their rate of detentions during the treatment period. In Figures 2.2
and 2.4, Control Subjects Three and Five showed decreases in the de-
tentions they received. In Figure 2.3, Control Subject Four showed a
fluctuation throughout the entire study. Again, there was no clear
pattern of improvement as there had been with the experimental
subjects.

An average line of best fit graph is supplied by Figure 2.5.
This graph shows that the experimental subjects as a group leveled off
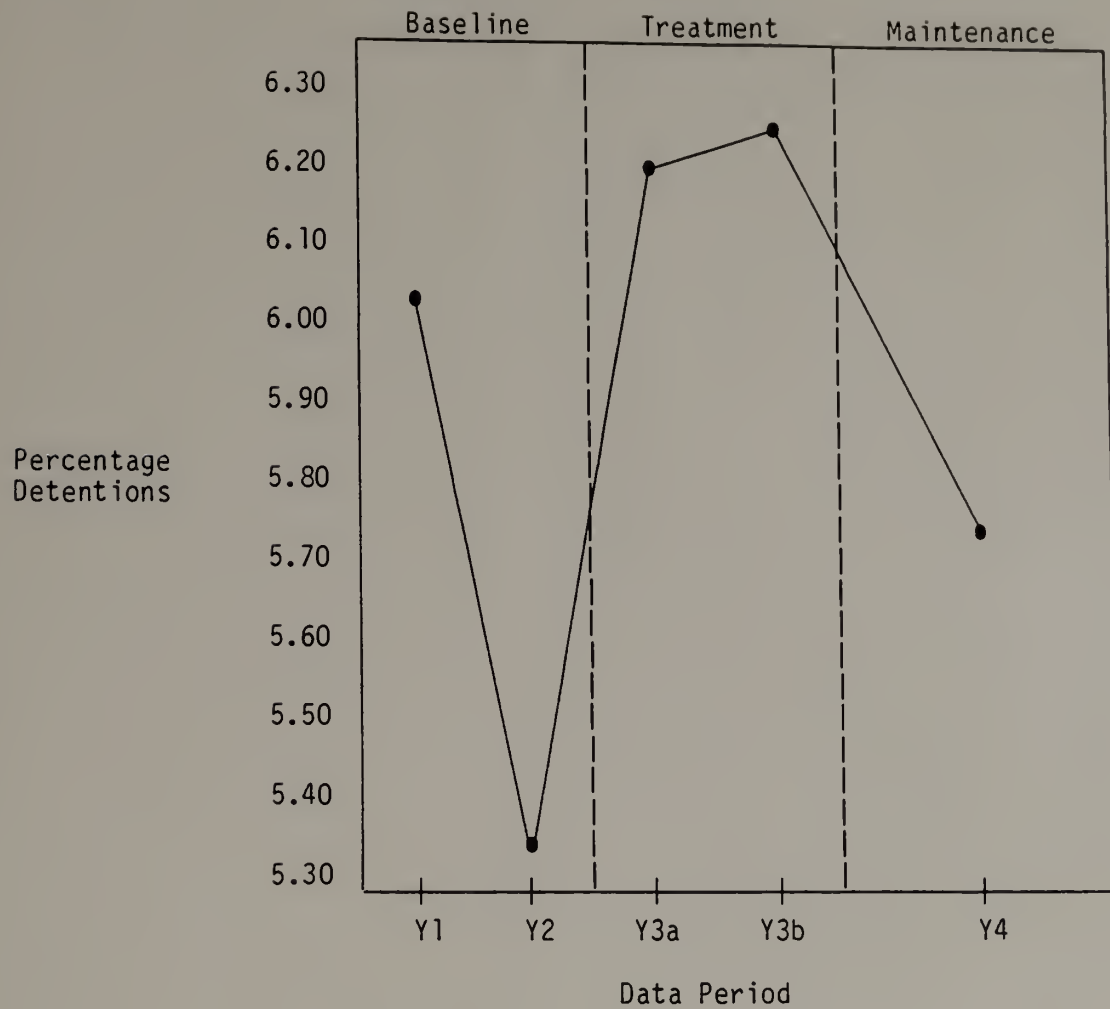
Figure 2.0. Percentage of Detentions per School Days in Session for
Control Subject 1
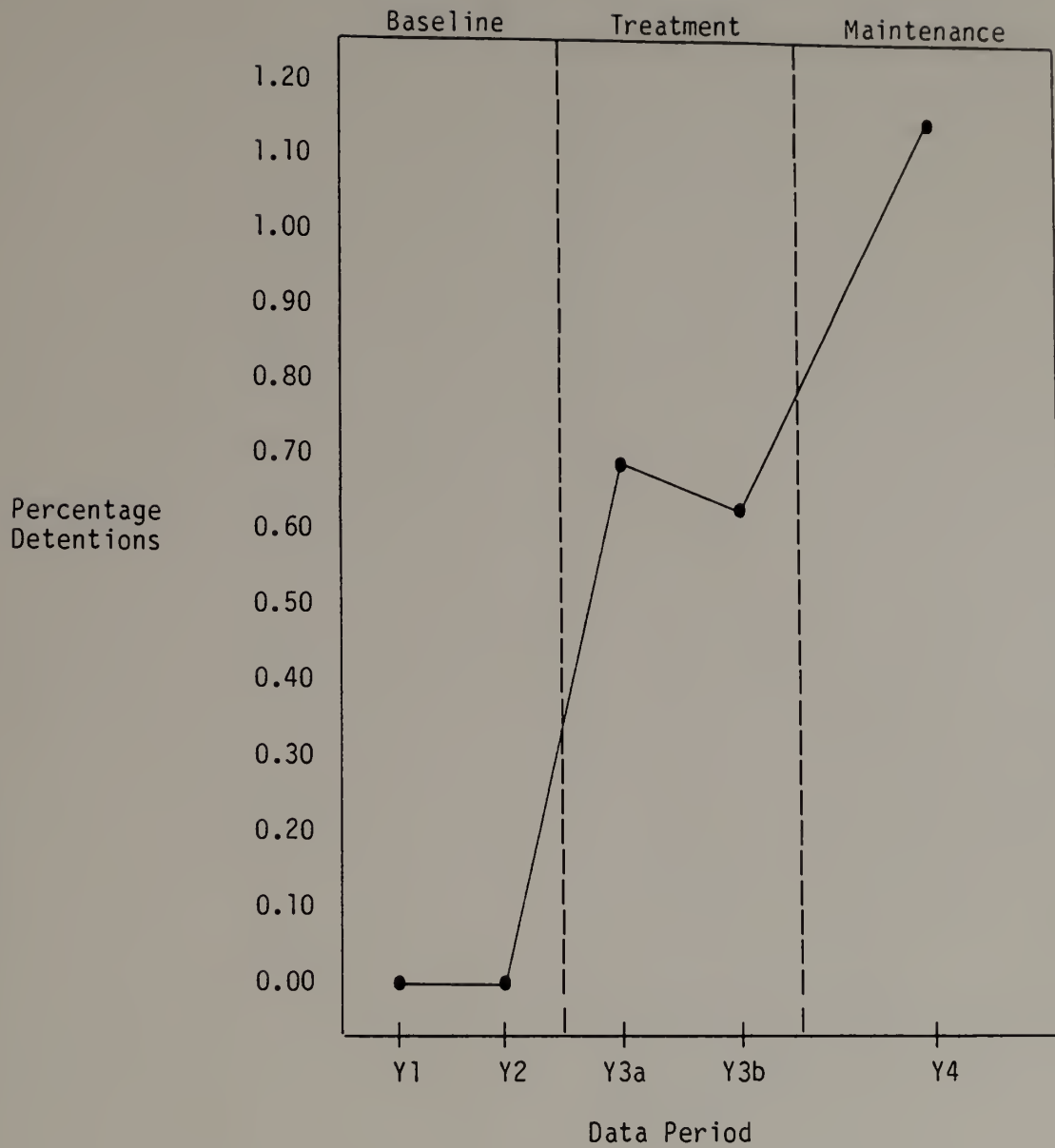
Figure 2.1. Percentage of Detentions per School Days in Session for Control Subject 2
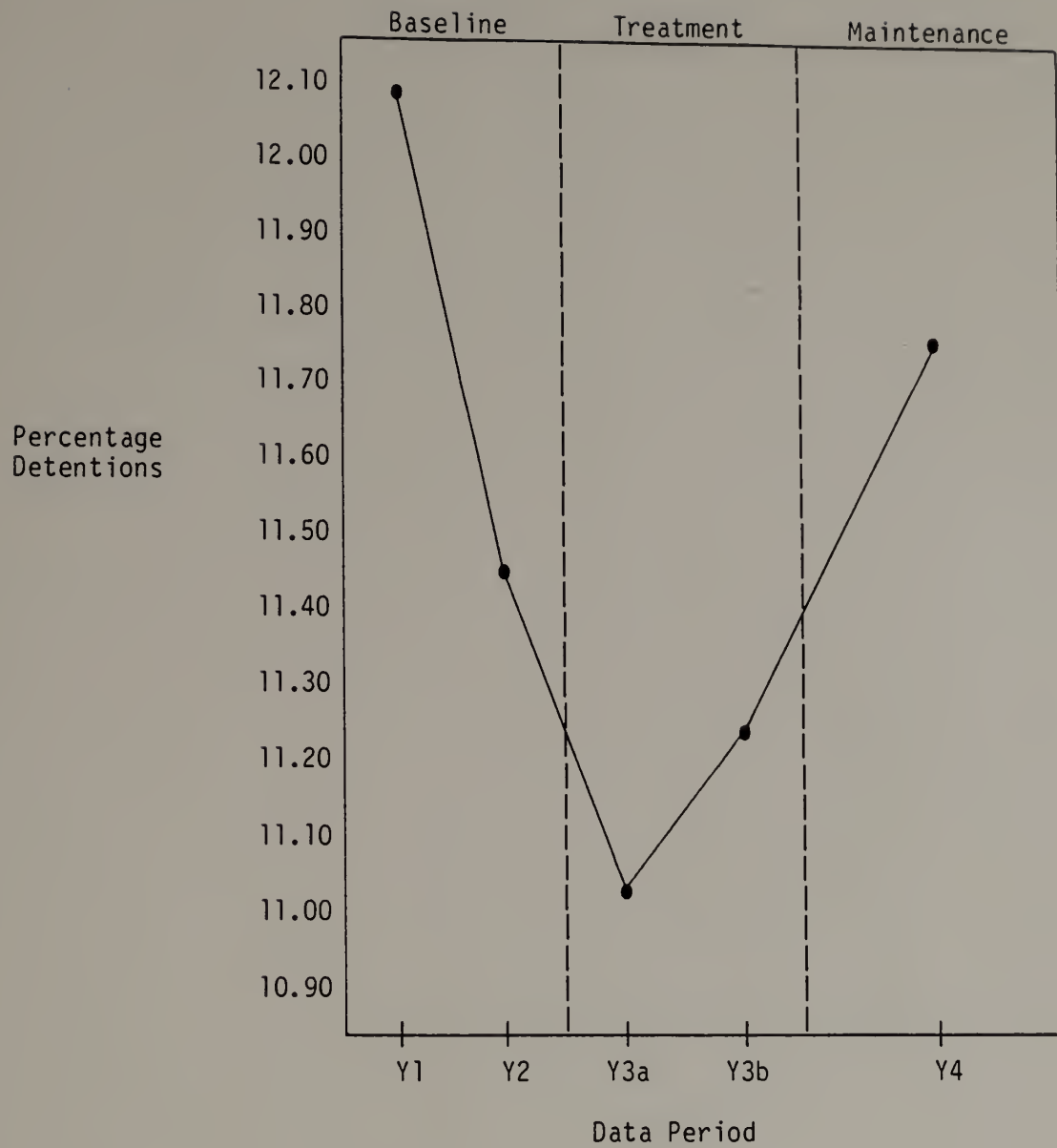
Figure 2.2.   Percentage of Detentions per School Days in Session for
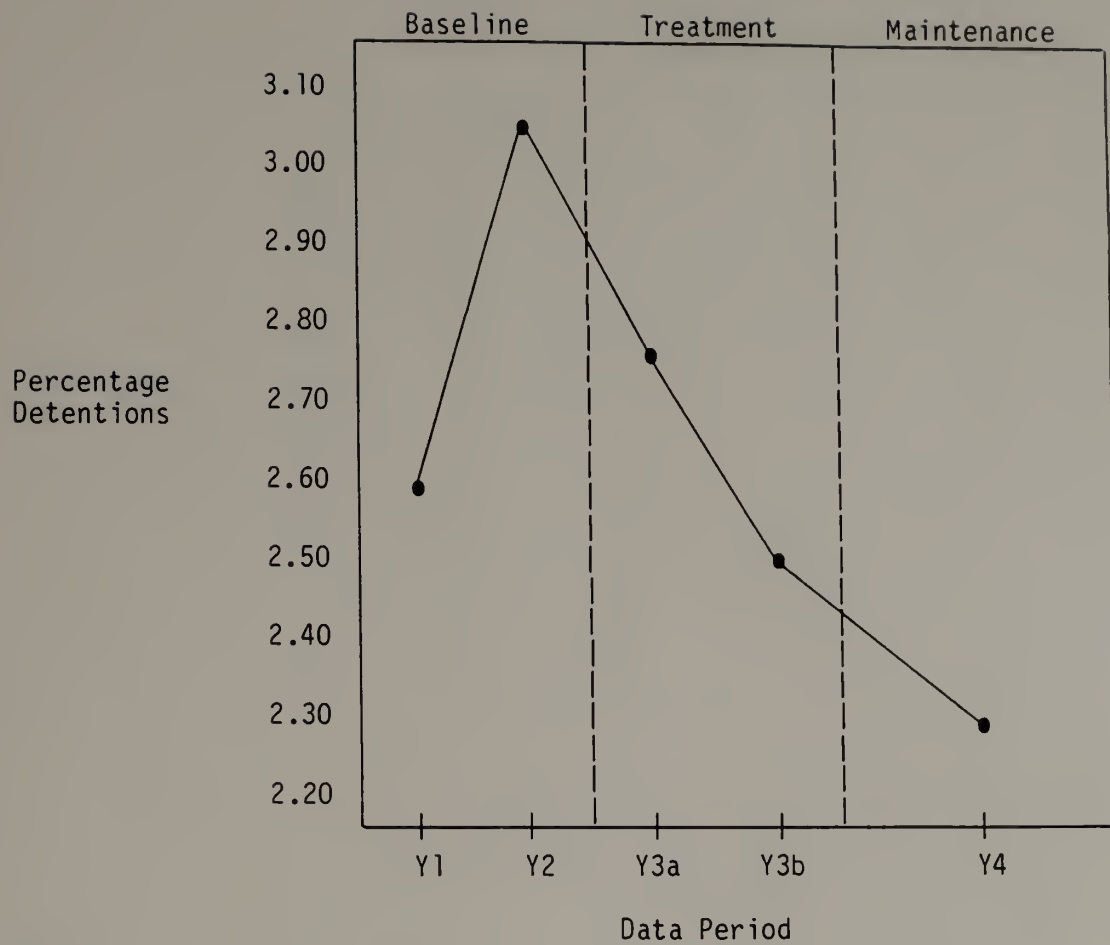Control Subject 3
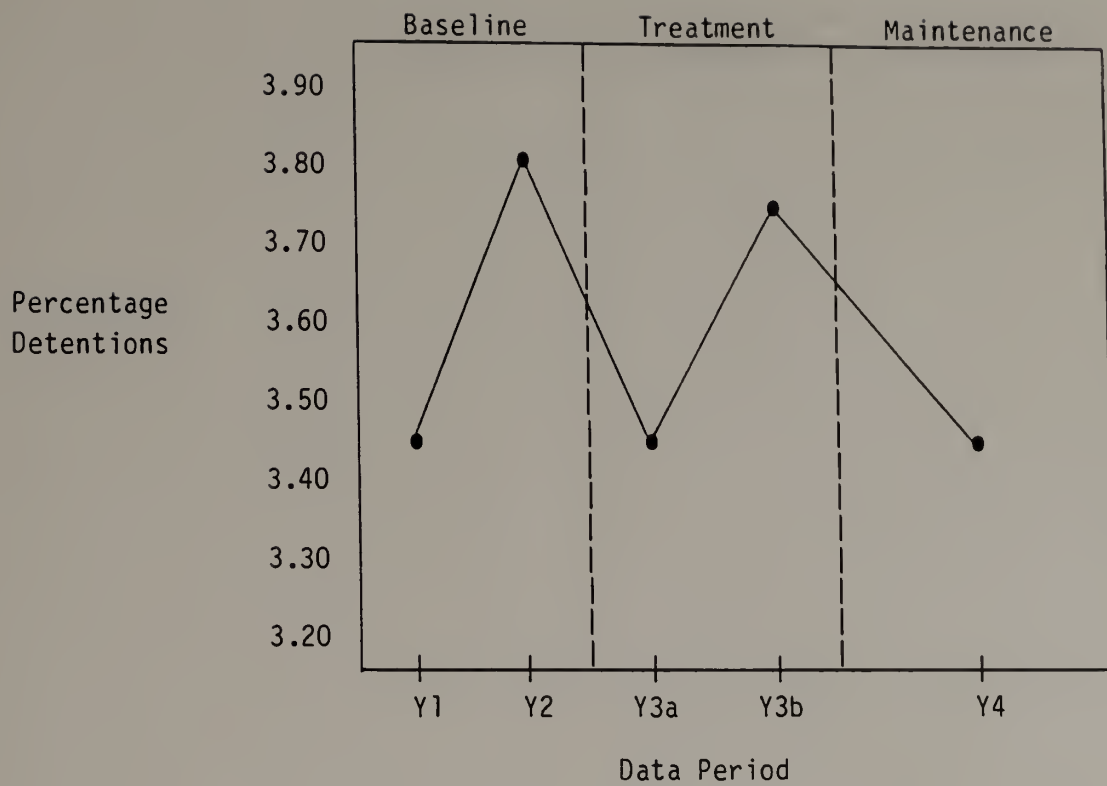
Figure 2.3.   Percentage of Detentions per School Days in Session for
             Control Subject 4

85
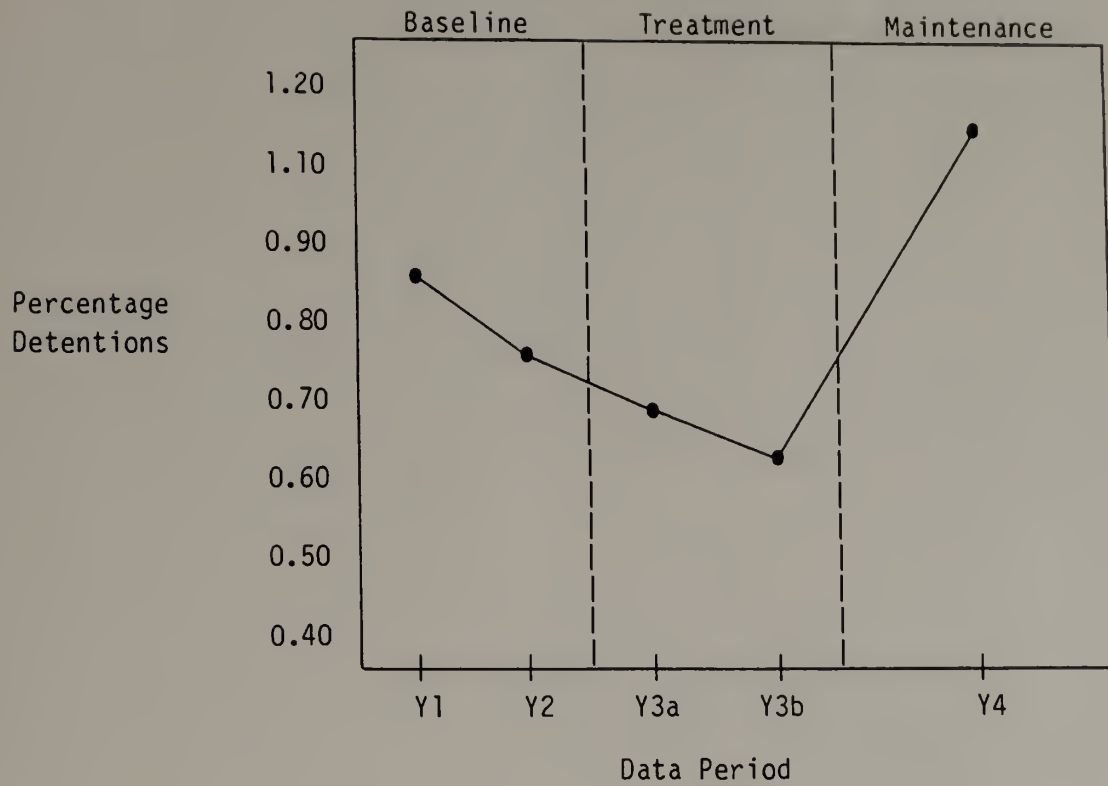
Figure 2.4. Percentage of Detentions per School Days in Session for Control Subject 5
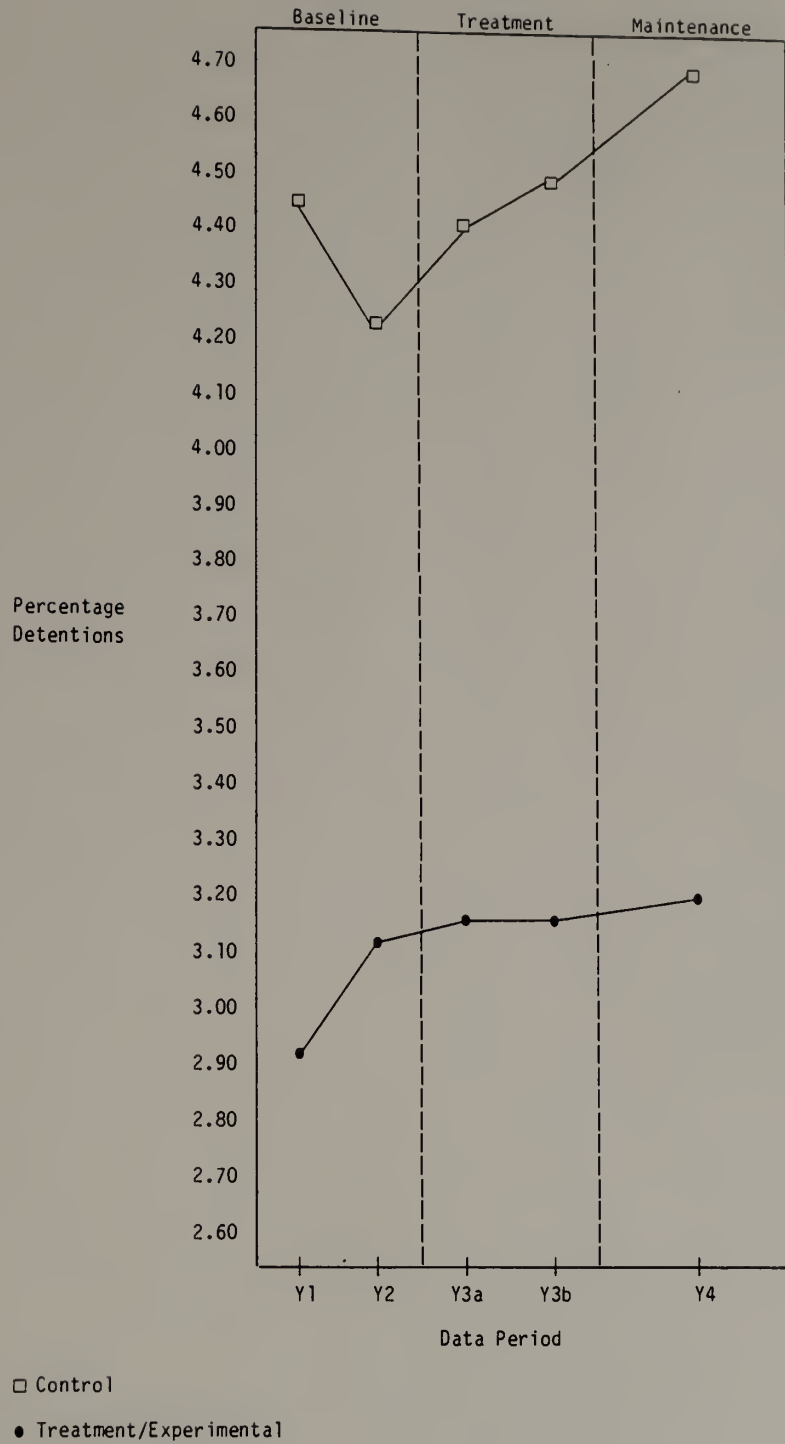
Figure 2.5. Mean of the Percentage of Detentions per School Days in Session for All Experimental and Control Subjects for Each Data Period

with their detention rate after the second baseline until the mainte-
nance period. Experimental Subject Five's data strongly affects these
findings. Without that subject's data, a group decrease would be
apparent. Contrarily, the control subjects actually increase their
rate of detentions over the course of the study.

<center>Hypothesis IV</center>

In support of accepting Hypothesis IV, Table 6.0 presents the
mean ratings of experimental subjects by administration and classroom
teachers. It was predicted that they would rate experimental subjects
higher on a short graphic rating scale assessing cooperation, rapport,
positive attitudes, and the degree to which they accepted the conse-
quences of their behavior after treatment than before it. The experi-
mental subjects had sixteen improvements or positive movements out of
a possible twenty-five, in their cooperation, constructiveness, rap-
port and perceived ability to accept the consequences of their own
behavior. There were four nonmovements and five negative movements
on the five characteristics or behaviors of these subjects, judged by
administration and classroom teachers.

When cross-referenced with the data presented in Table 6.1 on the
mean ratings of control subjects by administration and teachers, there
was considerably less positive movement than in the experimental sub-
jects and more negative movement in the control subjects. The control
subjects had seventeen negative movements over the course of the

Table 6.0

X̄ Ratings of Experimental Subjects by Administration and Teachers

	Cooperation	Constructiveness	Rapport with Teacher	Rapport with Peers	Accepting Consequences
Experimental Subject 1					
Baseline 1	3.5	3.33	3.83	3.83	3.17
2	3.0	3.0	3.67	2.91	2.83
Treatment 3a	3.33	3.5	3.5	3.67	3.33
3b	3	3.29	3.57	3.83	3.17
Maintenance 4	3.93	3.79	3.57	3.57	3.57
General Movement	+	+	-	-	+
Experimental Subject 2					
Baseline 1	3.67	3.33	4.0	4.0	4.0
2	3.8	3.4	4.2	3.4	3.9
Treatment 3a	3.62	3.0	4.0	4.0	4.25
3b	4.0	3.75	4.0	4.0	3.88
Maintenance 4	4.38	4.5	4.25	4.25	4.0
General Movement	+	+	+	+	0
Experimental Subject 3					
Baseline 1	4.0	3.33	4.0	3.33	4.0
2	4.5	3.5	4.0	3.5	3.5
Treatment 3a	3.67	3.0	3.33	3.33	3.67
3b	1.0	2.5	1.5	2.5	1.0
Maintenance 4	4.0	4.0	3.0	3.67	3.33
General Movement	0	+	-	+	-

Table 6.0, continued

	Cooperation	Constructiveness	Rapport with Teacher	Rapport with Peers	Accepting Consequences
Experimental Subject 4					
Baseline 1	3.0	3.0	3.5	3.25	3.25
2	4.0	3.5	3.5	3.5	4.0
Treatment 3a	4.55	3.0	4.55	2.75	3.0
3b	3.0	3.25	3.50	4.55	3.25
Maintenance 4	3.5	3.5	3.5	4.0	3.25
General Movement	+	+	0	+	0
Experimental Subject 5					
Baseline 1	3.6	4.6	4.2	3.8	3.2
2	3.3	3.4	3.6	3.8	3.0
Treatment 3a	4.67	4.0	4.0	4.33	4.33
3b	3.88	3.88	4.5	4.5	4.0
Maintenace 4	4.25	4.0	4.25	4.5	4.25
General Movement	+	-	+	+	+

Notes:

(1) Number is equal to the mean scored on each behavior. 1 = lowest, 5 = highest rating.

(2) General movement measured from Period 1 to Period 4.

Table 6.1

X̄ Ratings of Control Subjects by Administration and Teachers

	Cooperation	Constructiveness	Rapport with Teacher	Rapport with Peers	Accepting Consequences
Control Subject 1					
Baseline 1	4.33	4.33	4.0	4.0	4.0
2	5.0	4.75	5.0	4.5	3.75
Treatment 3a	3.67	3.67	3.67	3.67	3.67
3b	3.33	3.33	3.67	3.67	3.67
Maintenance 4	4.0	3.5	3.33	3.67	3.5
General Movement	+	-	-	-	-
Control Subject 2					
Baseline 1	4.0	3.5	3.5	2.75	3.0
2	4.75	3.75	4.25	2.5	3.5
Treatment 3a	2.75	3.0	3.0	2.0	2.5
3b	3.65	3.25	3.25	3.0	2.5
Maintenance 4	3.2	3.0	3.0	2.4	2.2
General Movement	-	-	-	-	-
Control Subject 3					
Baseline 1	3.2	3.6	3.2	3.0	3.2
2	3.08	3.17	3.33	3.33	3.17
Treatment 3a	3.43	3.29	3.21	3.50	3.50
3b	3.5	3.17	3.5	3.33	3.33
Maintenance 4	3.5	3.0	3.4	3.2	2.8
General Movement	+	-	+	+	-

Table 6.1, continued

	Cooperation	Constructiveness	Rapport with Teacher	Rapport with Peers	Accepting Consequences
Control Subject 4					
Baseline 1	3.8	3.6	2.8	3.0	3.8
2	3.25	3.0	3.0	3.25	3.5
Treatment 3a	3.5	2.6	3.2	3.4	3.0
3b	2.83	2.83	3.17	3.83	3.5
Maintenance 4	3.5	3.25	3.33	3.42	3.75
General Movement	-	-	-	+	-
Control Subject 5					
Baseline 1	4.0	3.5	4.0	2.5	3.25
2	3.6	3.4	3.0	2.6	3.0
Treatment 3a	4.0	4.0	4.0	2.0	4.0
3b	2.5	3.0	2.5	2.0	2.5
Maintenance 4	3.75	3.65	4.0	2.5	3.75
General Movement	-	+	0	0	+

Notes:

(1) Number is equal to the mean scored on each behavior. 1 = lowest, 5 = highest rating.

(2) General movement measured from Period 1 to Period 4.

study, six positive, and two nonmovements, almost the reverse of the results of the experimental subjects.

Constructiveness, cooperation, and rapport with peers seemed to be the most affected by treatment. Four of the five experimental subjects were judged to be improved in cooperation levels. There were no decreases in cooperation by any experimental subject. Contrarily, four of the control subjects had perceived decreases in cooperation.

Constructiveness, too, was perceived as greatly changed in the experimental subjects. Four of the experimental subjects improved on this dimension, one was judged to be less constructive. Four of the control subjects were viewed as having decreases in constructiveness. There were greater improvements in rapport with peers with treated subjects than with control subjects. Four of the experimental subjects improved in the judgements of their raters, while only two of the control subjects improved on this same variable.

There also seemed to be movement beyond treatment into the maintenance period, suggestive of the data on other social skills training studies (refer to Chapter II). In most of the cases, the ratings increased for these experimental subjects into the maintenance periods.

Hypothesis VI

There was no substantial increase in any of the predicted experimental subjects' level of happiness during the course of the study (refer to Table 7.0). Contrary to this hypothesis, no experimental

Table 7.0

Self Ratings on Happiness Levels on a Scale from 1 to 7

Data Period	Subjects									
	Exp. 1	Exp. 2	Exp. 3	Exp. 4	Exp. 5	Con. 1	Con. 2	Con. 3	Con. 4	Con. 5
Baseline										
Y1	3	3	1	4	2	2	6	2	2	3
Y2	2	4	1	4	2	2	5	2	4	4
Treatment										
Y3a	2	4	1	4	1	6	7	6	1	5
Y3b	3	3	1	4	3	3	5	7	2	4
Maintenance										
Y4	3	3	1	4	1	1	5	3	3	4
General Movement	0	0	0	0	-	-	+	-	0	-

Notes:

(1) General movement from baseline Y1 through to the end of treatment period Y3b.

(2) + = positive change in happiness, 0 = no change, - = negative change.

(3) 1 represents perfect happiness, 7 represents perfect unhappiness level.

subject perceived himself to be happier after the treatment period
than before. One control subject perceived positive changes in happi-
ness. The experimental subjects did have less general negative move-
ment than did their control subjects counterparts. Three of the con-
trol subjects decreased in their overall happiness level over the
course of the study. Only one experimental subject had a correspond-
ing decrease in the perception of happiness.

The results represented by Table 7.1 show relatively little dif-
ference between experimental and control subjects on their perceived
level of their own mental health. Only one experimental subject felt
his mental health had improved from baseline Y1 period until the end
of the treatment period. Four of the experimental subjects reported
that they felt less mentally healthy compared to three control sub-
jects who felt less mentally healthy at the end of the treatment
assessment period.

Hypothesis VII

Hypothesis VII, that experimental subjects would score themselves
higher on a seven-point mental health and happiness scale after treat-
ment than before it, cannot be accepted by the results of the data.
It had been predicted that the experimental subjects would score them-
selves higher on a seven-point mental health and happiness scale after
treatment than during the baseline periods, Y1 and Y2. When viewing
Table 7.2 for the summary of the mean ($\bar{X}$) self ratings of experimental

Table 7.1

Self Ratings on Mental Health on a Scale from 1 to 7

Data Period		Exp. 1	Exp. 2	Exp. 3	Exp. 4	Exp. 5	Con. 1	Con. 2	Con. 3	Con. 4	Con. 5
						Subjects					
Baseline											
Y1		3	3	2	2	2	2	5	5	3	5
Y2		3	3	4	4	3	2	6	5	5	3
Treatment											
Y3a		2	3	3	3	3	6	6	1	2	4
Y3b		2	4	3	4	4	4	7	7	2	4
Maintenance											
Y4		2	3	3	1	2	1	6	3	3	2
General Movement		+	-	-	-	-	-	-	-	+	+

Notes:

(1) General movement from baseline Y1 through to the end of treatment period Y3b.

(2) + = positive change in perceived mental health, 0 = no change, - = negative change.

(3) 1 represents extremely mentally healthy, 7 represents extremely mentally unhealthy.

Table 7.2

Summary of Self Ratings: Mean of Experimental and Control Subjects
on Self Perceived Happiness and Mental Health

Data Period	Happiness		Mental Health	
	Experimental	Control	Experimental	Control
Baseline				
Y1	2.4	3.0	2.4	4.0
Y2	2.6	3.5	3.4	4.2
Treatment				
Y3a	2.4	5.0	2.8	3.8
Y3b	2.8	4.2	3.4	4.8
Maintenance				
Y4	2.4	3.2	2.2	3.0
General Movement	-	-	-	-

Notes:

(1) General movement from baseline Y1 through to the end of treatment Y3b.

(2) + = positive change in happiness, 0 = no change, - = negative change.

(3) 1 represents perfect happiness, 7 represents perfect unhappiness.

and control subjects on perceived happiness and mental health, it is
apparent that neither the experimental nor the control subjects re-
ported feeling happier after treatment. Both sets of subjects felt
slightly less happy.

On this same table it is evident that mental health improvements
were also not perceived. Both control and experimental subjects
reported feeling less mentally healthy.

Hypothesis V

While reviewing the results from the Hahnemann High School Rating
Scale that were completed by each subject's vocational instructor dur-
ing each data period, it appears that the changes are varied and do
not move in any predicable pattern (refer to Tables 8.0 and 8.1). The
differences between the experimental subjects' results and the control
subjects' results were similar and unexplainable, thus negating Hypo-
thesis V, that the experimental subjects would be scored higher after
treatment on the Hahnemann High School Behavior Rating Scale by their
vocational class teachers after treatment than before it. There were
almost an identical number of positive and negative changes in each
group of subjects.

It had been predicted by this hypothesis that the experimental
subjects would decrease in their verbal negativism and dogmatic in-
flexible scales and increase in their verbal interaction and rapport
with the teacher. The lack of any predictable differences and the

Table 8.0

Results from the Hahneman High School Rating Scale for All Experimental Subjects

Period	Experimental Subject 1				Experimental Subject 2				Experimental Subject 3			
	Verbal Negativism	Dogmatic/ Inflexible	Verbal Interaction	Rapport With Teacher	Verbal Negativism	Dogmatic/ Inflexible	Verbal Interaction	Rapport With Teacher	Verbal Negativism	Dogmatic/ Inflexible	Verbal Interaction	Rapport With Teacher
Baseline												
Y1	3	3	9	12	4	4	7	9	9	14	9	14
Y2	3	3	10 +	11 -	4	7 -	8 +	9	11 -	16 -	8 -	9 -
Treatment												
Y3a	5 -	10 -	10	10 -	3 +	6 +	9 +	10 +	10 +	11 +	11 +	12 +
Y3b	4 +	5 +	9 -	11 +	5 -	8 -	8 -	9 -	10	14 -	10 -	13 +
Maintenance												
Y4	7 -	7 -	8 -	12 +	6 -	6 +	8	11 +	10	14	10 -	12 -

Table 8.0, continued

Period	Experimental Subject 4				Experimental Subject 5			
	Verbal Negativism	Dogmatic/ Inflexible	Verbal Interaction	Rapport With Teacher	Verbal Negativism	Dogmatic/ Inflexible	Verbal Interaction	Rapport With Teacher
Baseline								
Y1	5	7	11	12	4	8	10	13
Y2	3 +	6 +	10 -	12	4	5 +	12 +	14 +
Treatment								
Y3a	6 -	8 -	9 -	12	4	7 -	12	15 +
Y3b	5 +	9 -	9	11 -	5 -	7	11 -	13 -
Maintenance								
Y4	5	8 +	9	13 +	4	6 +	13 +	15 +

Note:

A "+" in the box with the number denotes a positive change or improvement on the named behavior.
A "-" denotes negative change. An absence of a "+" or a "-" in the box denotes no change.
A "+" in Verbal Negativism and Dogmatic/Inflexible scores would indicate a decrease in score.
A "+" in Verbal Interaction and Rapport with Teacher scores would indicate an increase in score.

Table 8.1

Results from the Hahneman High School Rating Scale for All Control Subjects

Period	Control Subject 1				Control Subject 2				Control Subject 3			
	Verbal Negativism	Dogmatic/ Inflexible	Verbal Interaction	Rapport With Teacher	Verbal Negativism	Dogmatic/ Inflexible	Verbal Interaction	Rapport With Teacher	Verbal Negativism	Dogmatic/ Inflexible	Verbal Interaction	Rapport With Teacher
Baseline												
Y1	4	9	8	9	11	15	7	11	5	13	14	13
Y2	5 –	12 –	7 –	10 +	12 –	14 +	6 –	7 –	5	13	14	14 +
Treatment												
Y3a	6 –	7 +	8 +	10	10 +	17 –	9 +	10 +	5	11 +	13 –	14
Y3b	6	9 –	7 –	12 +	14 –	17	8 –	8 –	5	9 +	12 –	15 +
Maintenance												
Y4	4 –	9	9 +	10 –	9 +	12 +	9 +	10 +	6 –	11 –	12	15

Table 8.1, continued

Period	Control Subject 4				Control Subject 5			
	Verbal Negativism	Dogmatic/ Inflexible	Verbal Interaction	Rapport With Teacher	Verbal Negativism	Dogmatic/ Inflexible	Verbal Interaction	Rapport With Teacher
Baseline								
Y1	12	15	15	9	4	9	9	10
Y2	9 +	10 +	6 +	6 -	9 -	12 -	9	10
Treatment								
Y3a	10 -	7 +	6	8 +	6 +	11 +	12 +	15 +
Y3b	10	9 -	6	8	10 -	9 +	6 -	9 -
Maintenance								
Y4	8 +	13 -	9 +	8	11 -	13 -	7 +	9

Note:

A "+" in the box with the number denotes a positive change or improvement on the named behavior.
A "-" denotes negative change. An absence of a "+" or a "-" in the box denotes no change.
A "+" in Verbal Negativism and Dogmatic/Inflexible scores would indicate a decrease in score.
A "+" in Verbal Interaction and Rapport with Teacher scores would indicate an increase in score.

amount of variance even between the baseline periods may have been

more indicative of a general deficiency in the instrument rather than

a lack of change by the experimental subjects. The Hahnemann's

reliability data is still unavailable.

As indicated in Figures 3.0 through 3.14, the results of the two

sociometric questions given to each subject's vocational classmates,

like the results of the Hahnemann, show no significant difference be-

tween the control and the experimental subjects. Hypothesis VI pre-

dicted that students in their vocational classes would choose experi-

mental subjects more frequently when questioned, "with whom would you

most like to have breaks?" and "with whom would you most like to work

on an assigned project?". The indices actually varied more due to the

differing numbers of respondents for each data session for each sub-

ject, during the various data periods, than to any real changes in the

choice patterns by their vocational classmates. In the short period

studied, fellow students did not appear to make changes in their re-

sponses to those sociogram questions.

Hypothesis I

Hypothesis I was accepted with adaptation and thus reservation.

The change in attitude on the Evaluative Semantic differential factor

about the treated topics of self, school and friends was less than the

hypothetically determined significance level of 1.0. Nonetheless,

improvements, as demonstrated by lower scores, were seen on thirteen
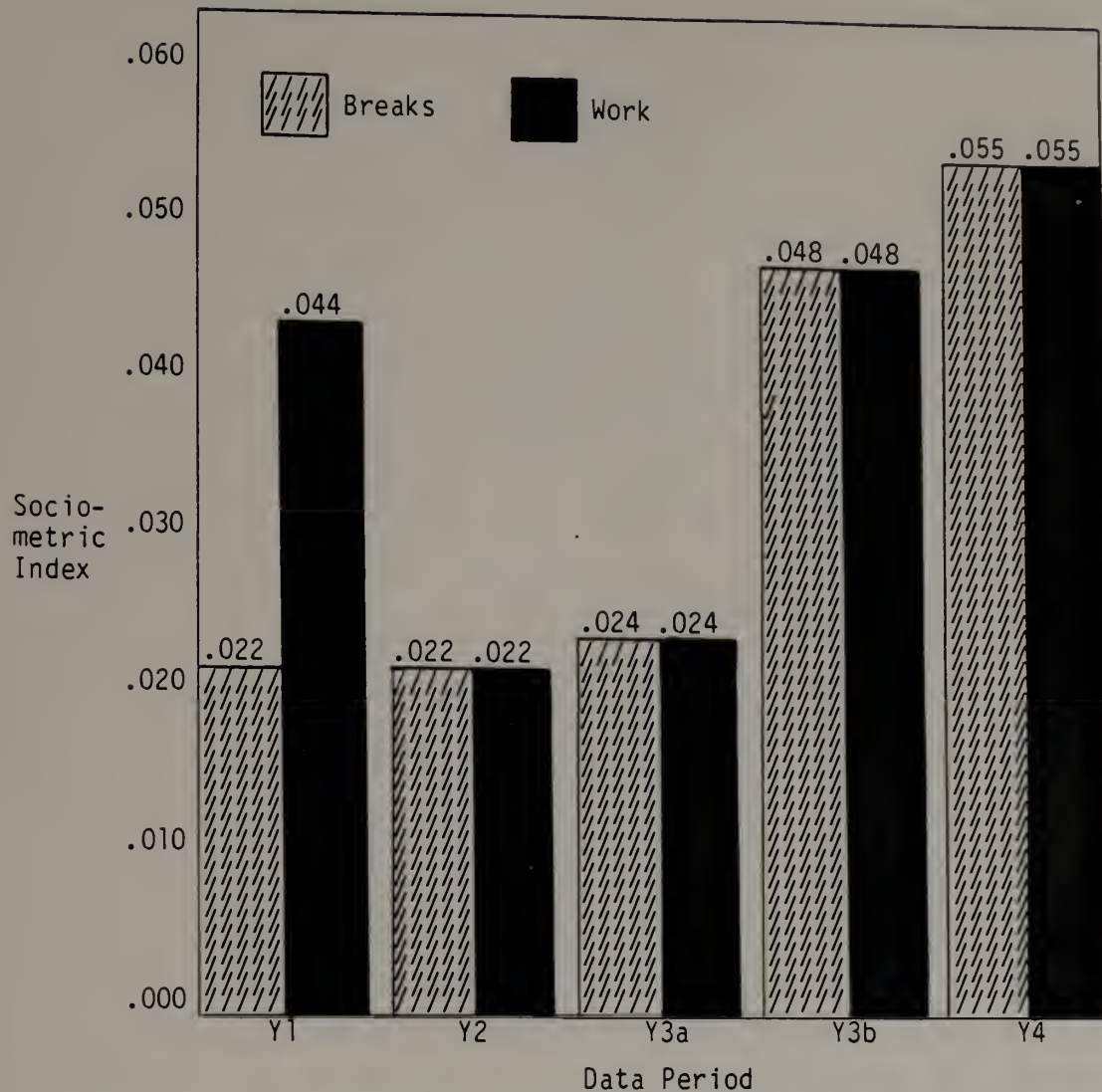
Note to Figures 3.00-3.24:

//// = Question 1: "With whom would you most like to go to morning and afternoon break?"

■ = Question 2: "With whom would you most like to work on an assigned project?"

Figure 3.00. Experimental Subject #1. Sociometric Indices on With Whom Vocational Classmates Would Most Like to Have Breaks and Work on Assigned Project
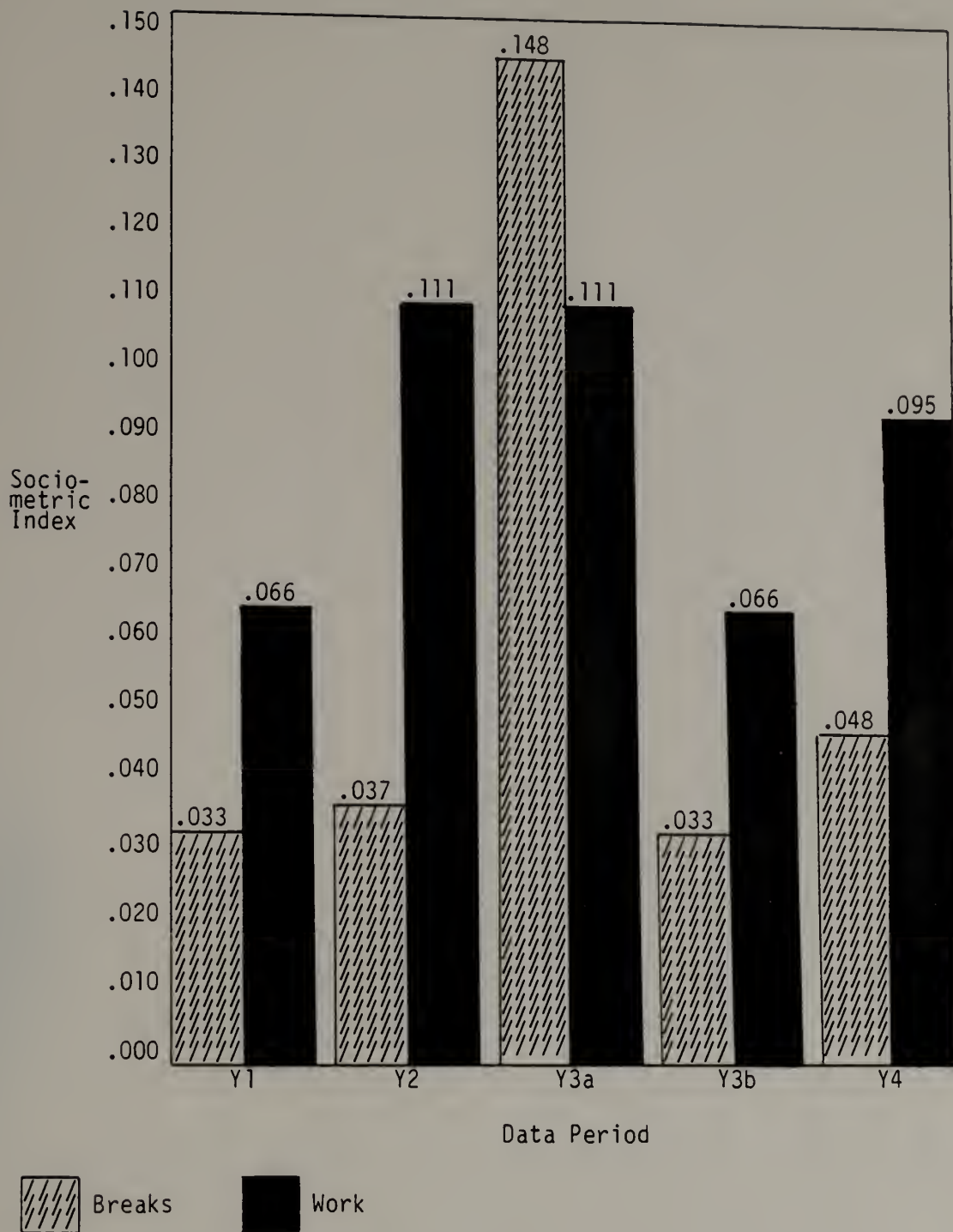
Figure 3.01. Experimental Subject #2. Sociometric Indices on With
Whom Vocational Classmates Would Most Like to Have
Breaks and Work on an Assigned Project
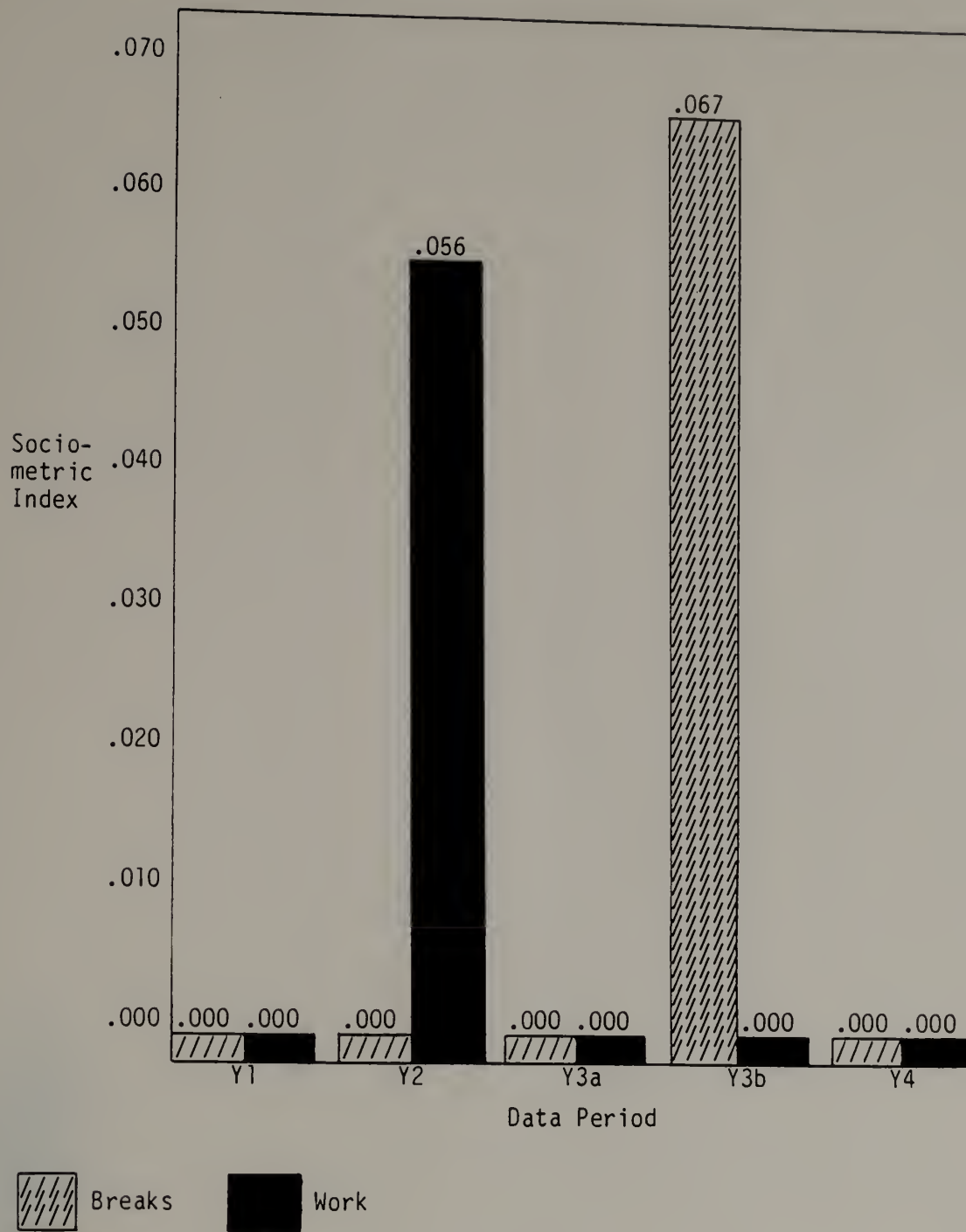
Figure 3.02. Experimental Subject #3. Sociometric Indices on With
Whom Vocational Classmates Would Most Like to Have
Breaks and Work on Assigned Project
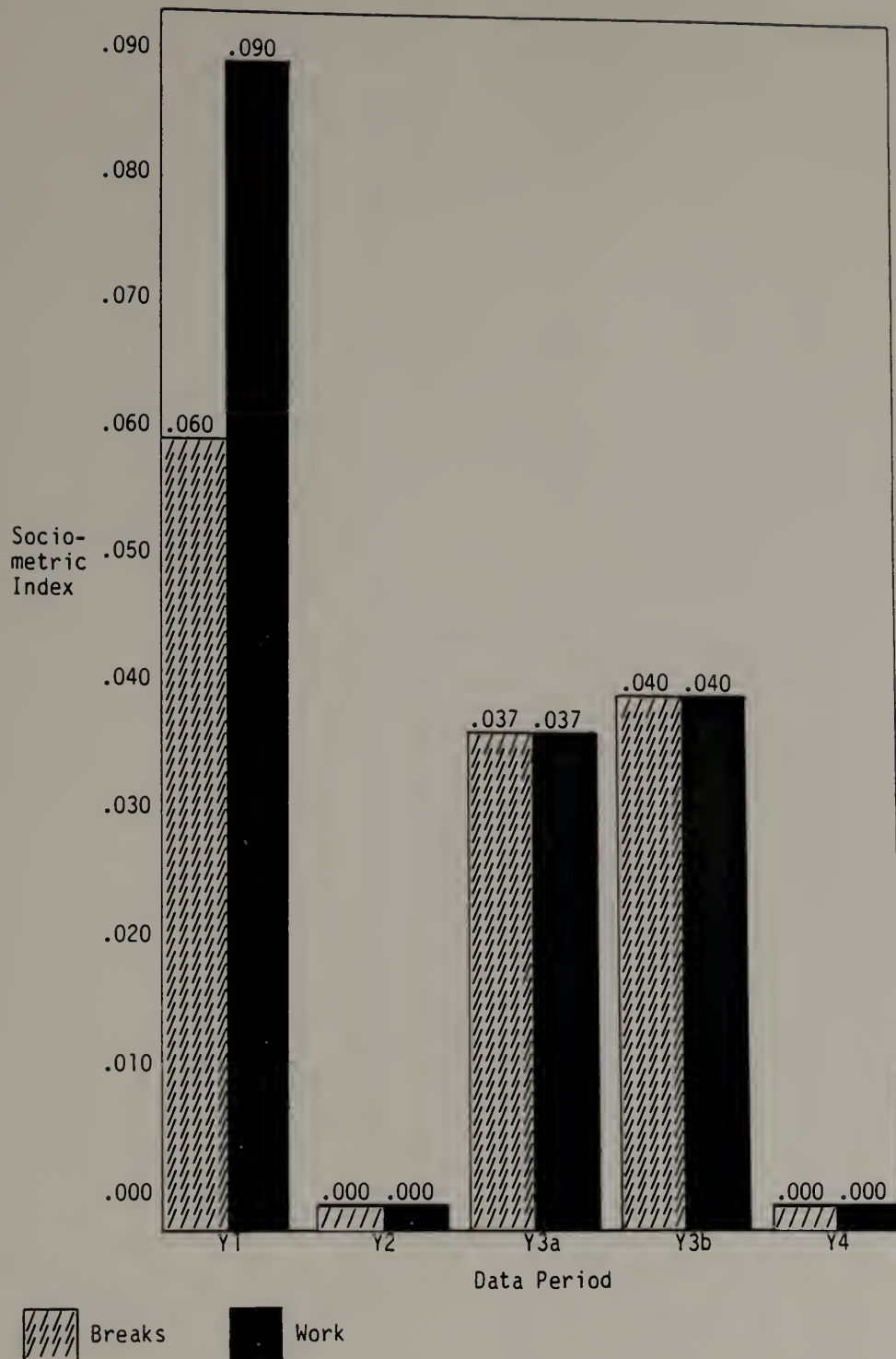
Figure 3.03.   Experimental Subject #4.   Sociometric Indices on With
Whom Vocational Classmates Would Most Like to Have
Breaks and Work on Assigned Project
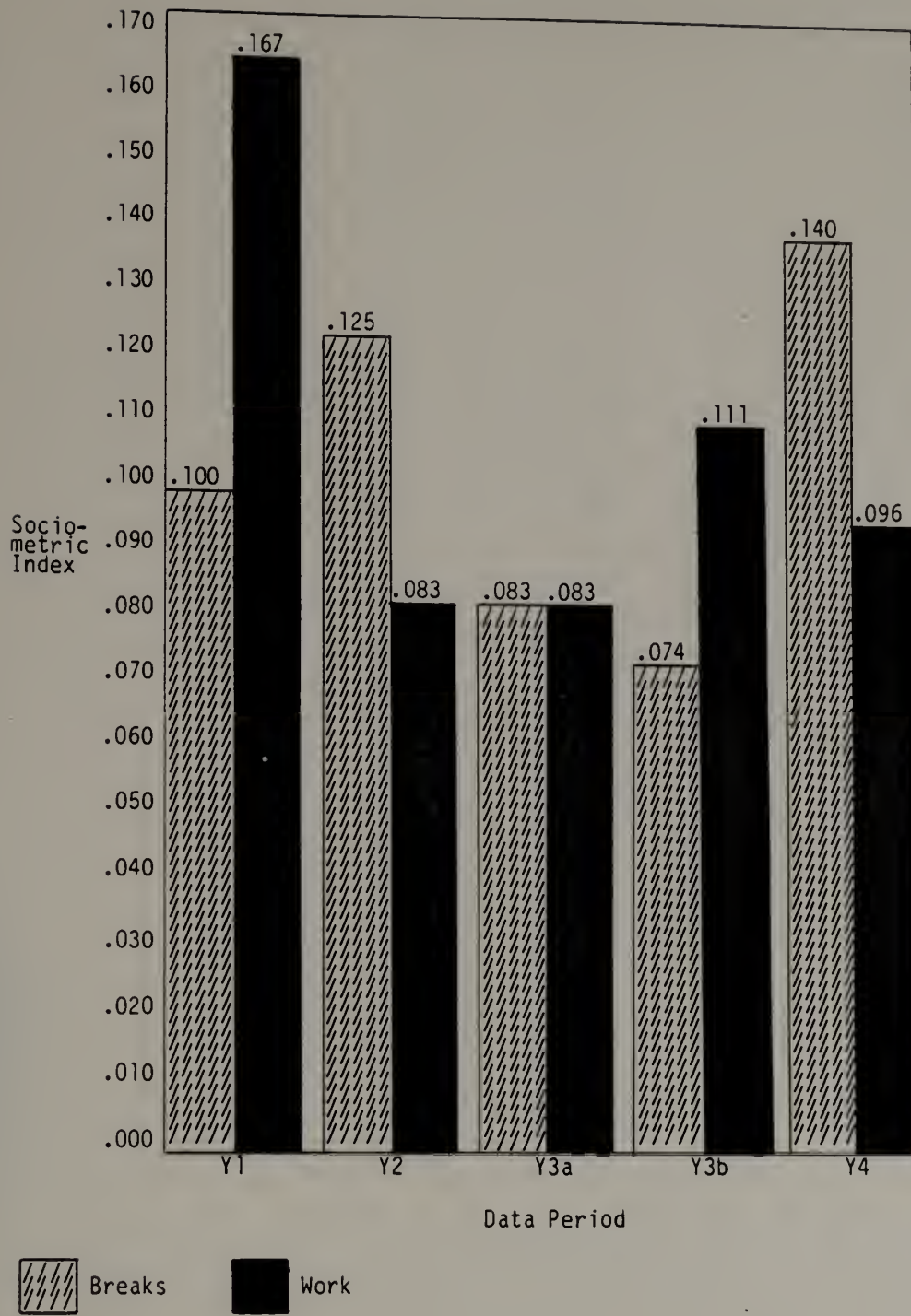
Figure 3.04. Experimental Subject #5. Sociometric Indices on With
Whom Vocational Classmates Would Most Like to Have
Breaks and Work on an Assigned Project
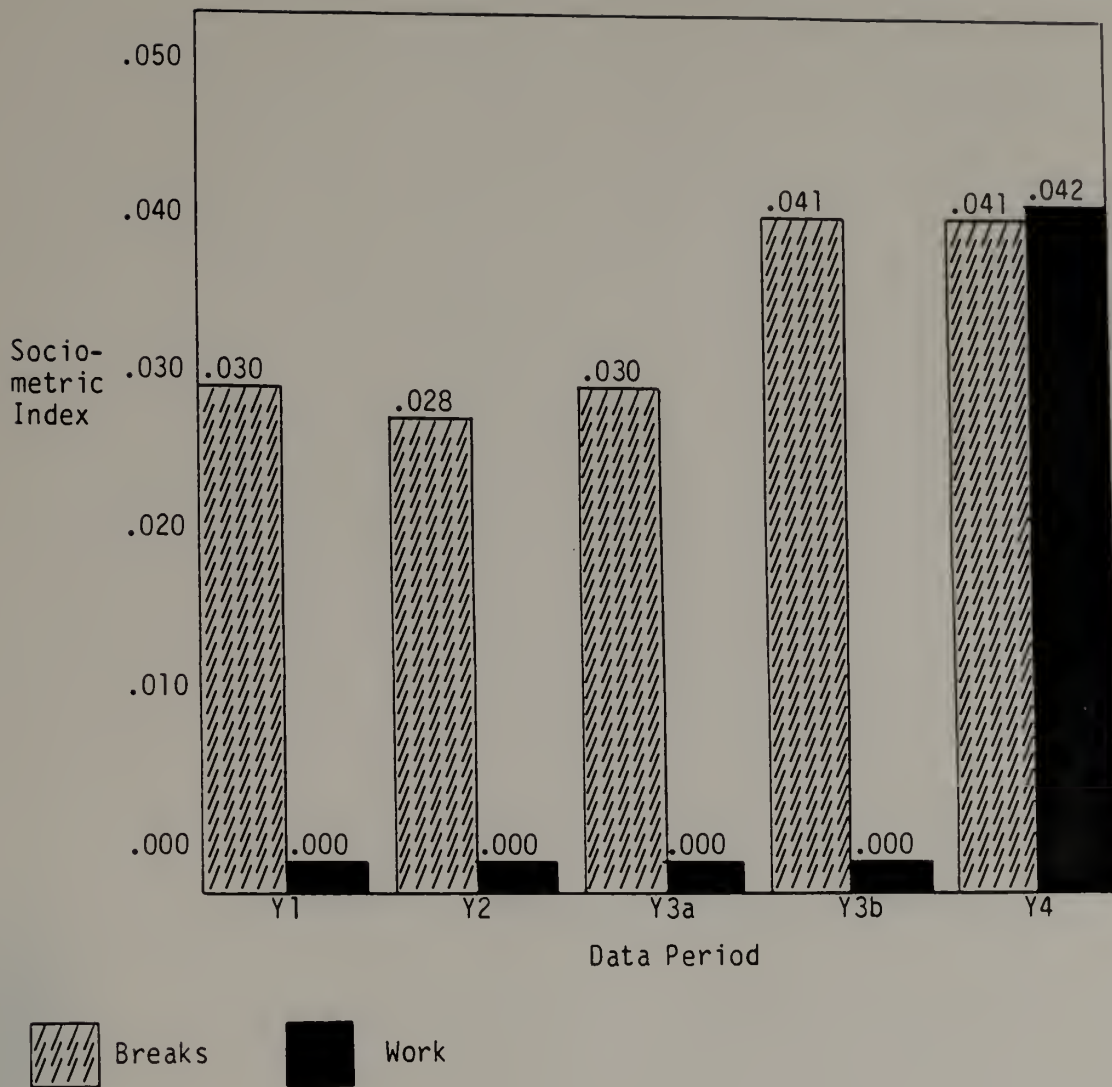
Figure 3.10. Control Subject #1. Sociometric Indices on With Whom Vocational Classmates Would Most Like to Have Breaks and Work on an Assigned Project
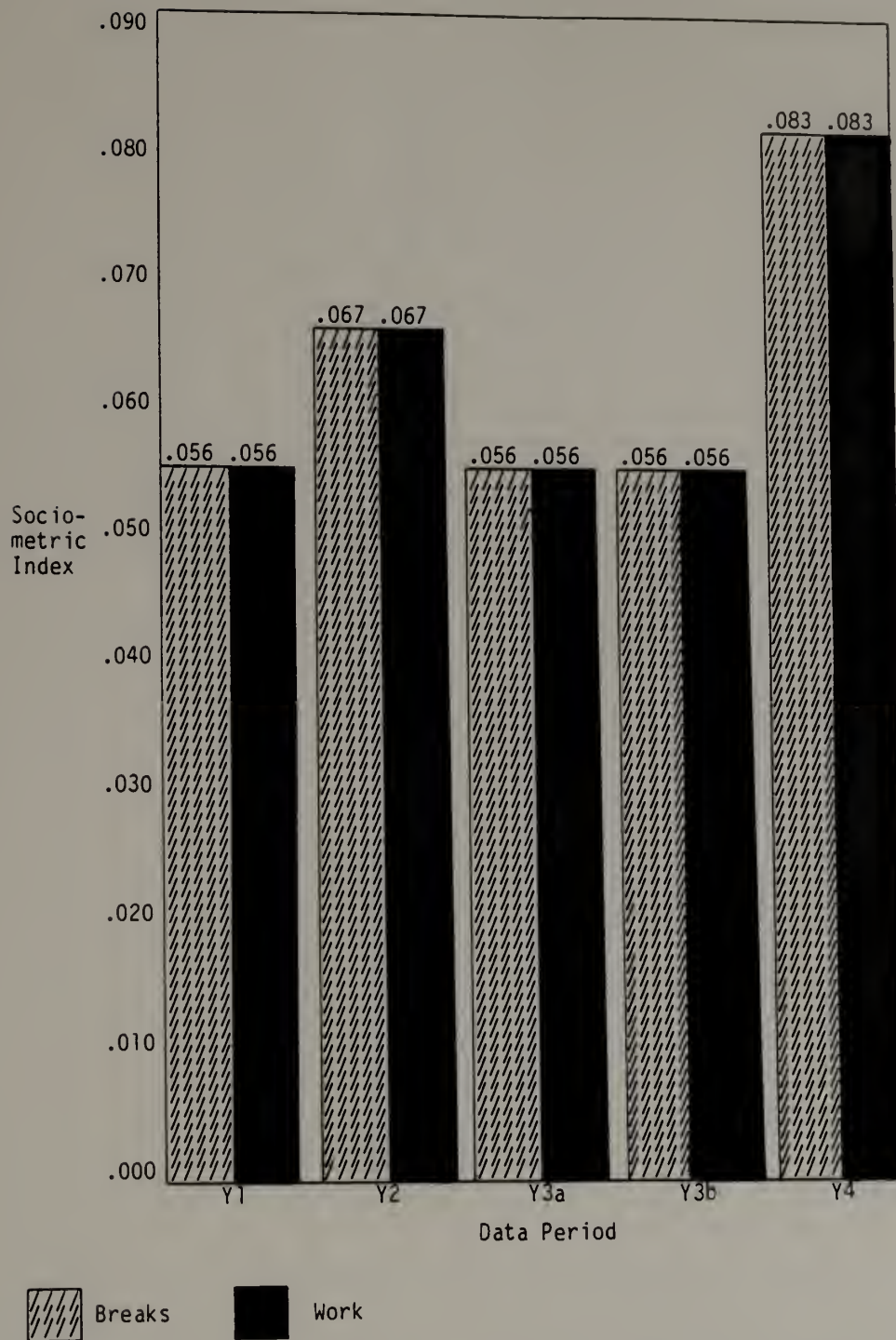
Figure 3.11. Control Subject #2. Sociometric Indices on With Whom Vocational Classmates Would Most Like to Have Breaks and Work on an Assigned Project
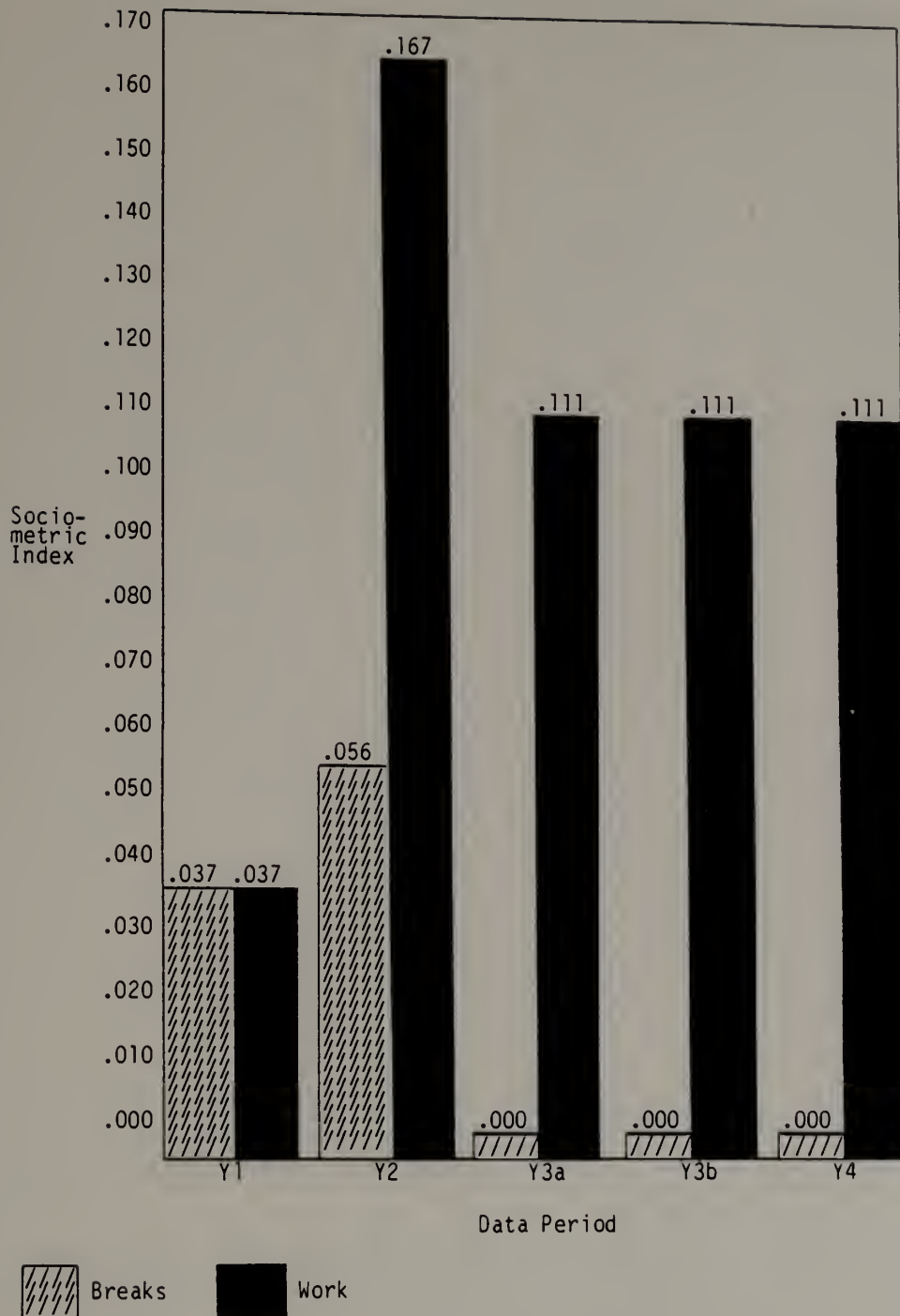
Figure 3.12. Control Subject #3. Sociometric Indices on With Whom
Vocational Classmates Would Most Like to Have Breaks
and Work on an Assigned Project
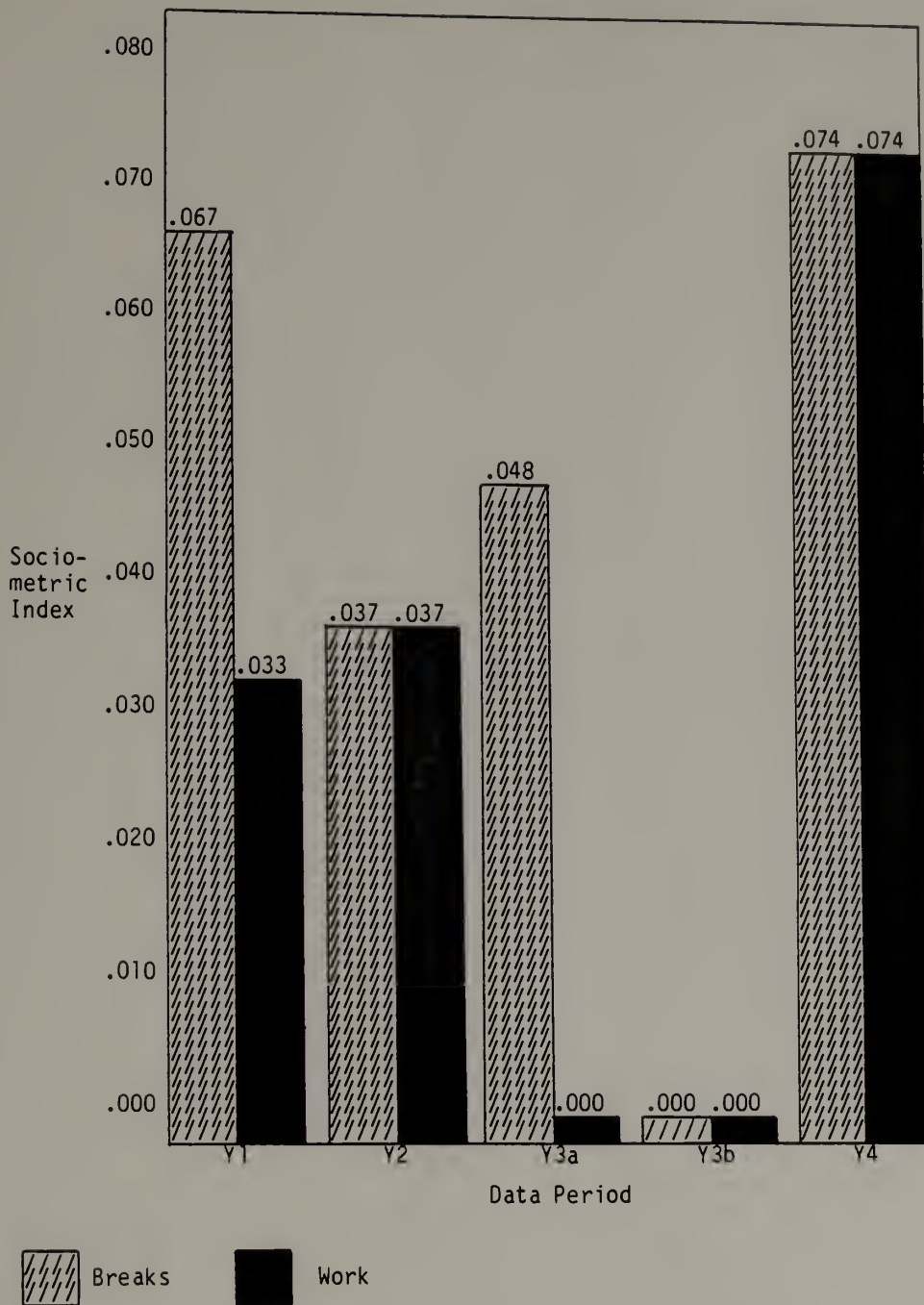
Figure 3.13. Control Subject #4. Sociometric Indices on With Whom
Vocational Classmates Would Most Like to Have Breaks
and Work on an Assigned Project
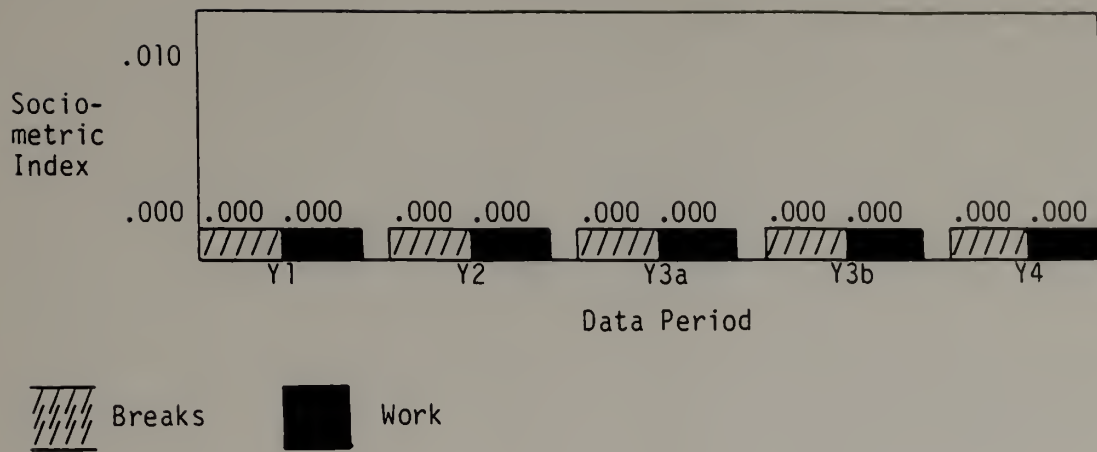
Figure 3.14. Control Subject #5. Sociometric Indices on With Whom Vocational Classmates Would Most Like to Have Breaks and Work on an Assigned Project

of the fifteen topics. A poorer attitude, demonstrated by a higher semantic differential score, was only seen in one experimental subject on any treated topic.

The semantic differential scores for all the experimental and control subjects expressed in Tables 9.0 and 9.1 show that there was no significant negative movement on the evaluative factor for any of the experimental subjects. Control Subject Three had two areas of significant negative change over the course of the study. Also, there was only a slight negative change in attitude in two of the experimental subjects on any of the topics, while there was a slight negative change in four of the five control subjects. However, there was actually more significant change in factor scores for the control subjects than the experimental subjects. But if all the positive change is considered on all of the topics, there were seventeen total positive changes in the experimental subjects as opposed to a total of thirteen positive changes for the control subjects.

Hypothesis II

There did not seem to be any differences between experimental and control subjects on the untreated topic of home, thus rejecting Hypothesis II, that the experimental subjects would show a lower score by 1.0 on the semantic differential focusing on the untreated topic of "Home."

Table 9.0

Semantic Differential Scores for All Experimental Subjects
on Topics of SELF, SCHOOL, FRIENDS, and HOME

	Experimental Subject 1				Experimental Subject 2				Experimental Subject 3				Experimental Subject 4				Experimental Subject 5			
	Self	School	Friends	Home	Self	School	Friends	Home	Self	School	Friends	Home	Self	School	Friends	Home	Self	School	Friends	Home
Y1	3.25	3.0	3.5	3.75	3.37	3.77	3.0	2.87	3.37	1.5	1.0	3.62	3.62	4.0	4.0	2.13	1.87	1.63	1.38	2.37
Y2	3.13	3.56	3.0	3.75	3.13	4.67	2.88	2.5	1.25	1.44	1.25	2.25	3.38	2.45	3.5	2.0				
Y3a	2.13	2.33	2.75	3.5	3.63	3.56	2.75	3.13	1.75	1.56	1.0	1.0	3.63	2.89	4.38	2.25	2.25	2.22	1.63	1.38
Y3b	3.13	3.44	2.75	2.87	3.38	4.11	3.13	3.25	3.0	1.0	1.5	1.0	3.38	3.67	4.13	2.0	4.25	3.0	3.13	1.75
Y4	3.13	3.78	2.38	3.13	3.0	3.88	2.86	3.0	2.25	1.0	1.0	1.0	3.38	3.12	3.5	2.0	1.75	1.55	1.25	1.75
General Movement	+	-	++	+	+	+	+	-	++	+		++	+	+	+	+	+	+	+	+

Notes:

(1) A "-" in the General Movement box denotes a negative movement in attitude on the named topic. A "--" denotes a significant negative movement. (Movement measured from Y1 to Y4 session.) A "+" denotes a positive movement in attitude. A "++" denotes a significant positive movement.

(2) Home was the untreated topic.

Table 9.1

Semantic Differential Scores for All Control Subjects
on Topics of SELF, SCHOOL, FRIENDS, and HOME

	Control Subject 1				Control Subject 2				Control Subject 3				Control Subject 4				Control Subject 5			
	Self	School	Friends	Home	Self	School	Friends	Home	Self	School	Friends	Home	Self	School	Friends	Home	Self	School	Friends	Home
Y1	2.75	1.66	2.75	4.25	3.75	4.12	4.12	4.75	1.0	2.88	1.75	4.5	3.5	3.55	3.25	2.85	4.85	3.88	4.0	4.12
Y2	2.66	1.67	2.63	2.85	3.38	3.56	4.0	5.63	1.0	2.88	1.63	5.25	4.25	3.12	4.25	3.38	2.75	3.45	2.86	5.13
Y3a	3.0	3.63	2.16	3.0	5.0	5.78	5.0	5.75	1.88	7.0	2.63	7.0	3.63	2.56	3.0	2.75	3.63	4.22	3.25	4.75
Y3b	2.25	2.45	2.25	2.13	4.25	3.0	1.75	6.37	4.0	7.0	4.0	7.0	2.0	2.22	2.5	2.38	4.25	4.25	3.25	4.0
Y4	2.0	2.0	2.38	2.0	3.38	3.0	1.5	5.63	1.5	4.0	2.75	4.25	2.38	2.22	2.25	2.38	4.5	4.44	4.38	4.0
General Movement	+	-	+	++	+	++	++	-	-	--	--	+	++	++	++	+	+	-	-	+

Notes:

(1) A "-" in the General Movement box denotes a negative movement in attitude on the named topic. A "--" denotes a significant negative movement.
A "+" denotes a positive movement in attitude. A "++" denotes a significant positive movement. (Movement measured from Y1 to Y4 session.)

(2) Home was the untreated topic.

General Comments

As can be seen from the data in Table 10.0, all of the experi-
mental subjects made an effort to gain the immediate rewards of the
study. The coffee, cigarette breaks, free time with their friends
and tee-shirts were sufficient motivators to change the experimental
subjects' behavior during the weekly treatment sessions.

All of the experimental subjects decreased the number of negative
verbal statements dramatically by the end of the treatment sessions.
These subjects then maintained these lower levels throughout the main-
tenance period. These results are clear. The summary of the results
and discussion of how to possibly get even more dramatic decreases in
negative verbal behavior will be presented in the next chapter.

Table 10.0

Session Data on the Amount of Positive, Neutral and Negative Verbal Statements Made

		Baselines						Maintenance	
		1	2	3	4	5	6	7	8
Experimental Subject 1	+	2	2	3	5	2	cancelled due to school being closed	2	1
	✓	58	50	71	81	44		58	49
	−	5	3	0	0	1		0	2
Experimental Subject 2	+	4	4	2	0	5	unexpectedly closed	4	1
	✓	34	35	51	49	41		41	55
	−	32	6	4	3	1		2	2
Experimental Subject 3	+	1	2	1	4	3		1	4
	✓	41	35	59	65	64		51	24
	−	19	10	3	1	0		0	0
Experimental Subject 4	+	7	3	2	4	2		7	3
	✓	45	44	51	49	65		56	37
	−	5	0	0	0	2		2	0
Experimental Subject 5	+	3	2	4	0	4		2	2
	✓	47	50	69	54	48		61	54
	−	2	2	0	4	0		0	0

C H A P T E R   V I

DISCUSSION

Summary

When maladjusted adolescents were given a cognitive behavioral
class of treatments that included modeling, rationale, self manage-
ment, and positive reinforcement for making positive and neutral ver-
bal statements and decreasing negative verbal statements, some changes
occurred. Detentions decreased substantially below the control sub-
jects' levels. In addition, it was noted that the suspension level
dropped to zero in all experimental subjects. There were apparently
far fewer mutually aversive reactions between treated subjects and
their teachers. This also supports the data by Polirstok and Greer
(1977) on the value of teaching the student to break the cycle of the
destructive, mutually aversive chain.

Teachers and school administrators predictably rated these
treated experimental subjects higher in cooperation, constructiveness,
rapport with peers and teachers, and their ability to accept the con-
sequences of their own behavior. This was especially apparent in the
teachers' and administrators' judgment of the treated subjects on
their cooperation level, constructiveness, and rapport with their
peers. Maloney, Harper, Braukmann, Fixsen, Philips and Wolf (1976)
also found that by changing one discrete behavior such as the ability
to volunteer answers, subjective judgments of appropriatness improved.

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The treated subjects did not, however, show significant dif-
ferences from the untreated subjects in the results of the Hahnemann
Behavior Inventory completed by their vocational teachers.

The predicted decrease in verbal negativism and dogmatic in-
flexible scales as rated by their vocational instructors simply did
not occur. Control and experimental subjects seemed to vary equally
during each data session. The predicted increase in verbal inter-
action and rapport with the teacher for the experimental subjects
did not occur, either. More on the topic will be presented under
the subheading, Critique of the Measures.

The same lack of significant differences occurred between the
treated and untreated subjects on their sociograms. Variance was
more in relationship to the number of students in the data sample
than any actual changes in the subjects' classmates' responses to the
two sociometric questions. This is contrary to the results found by
Oden and Asher (1977) that reported that socially isolated students
who were trained on specific social skills increased in their
sociometric ratings and friendship nominations. It may be that the
skills taught by these researchers--participation, cooperation,
communicating, validating, and supporting--were more valuable to the
individual in increasing these friendship ratings than improvement in
making positive and neutral statements.

The evaluative factor of the semantic differential or the assess-
ment of underlying attitudes revealed that there were small differ-
ences in the attitudes on the three treated topics: School, Friends

and Self between control and experimental subjects. The differences noted were that there was no significant level of negative movement for any experimental subject. Also, four of the five control subjects had some negative movement. Only two of the experimental subjects had any negative movement. The rest had only positive change. The treated topics of School, Friends and Self did change positively for the experimental subjects more than the control subjects if the criteria for significant change in a factor score is decreased to less than the originally determined 1.0. In the measures section, it was noted that that was only one way to determine significant change with the evaluative factor. Another way is to compare control and experimental variance. By this method, there was a noted change of attitude on the treated topic. It was not noted in the untreated topic of Home. Both Bem's Social Theory of Self Perception and the Social Dissonance Theory support this change pattern. The evaluative attitudes that were changed were those that were actually practiced but not generalized to other evaluative attitudes that were not practiced.

There was not the predicted increase in happiness by experimental subjects after treatment, but there was a decrease in perception of happiness by one experimental subject between the first baseline period until the end of the treatment sessions. A similar decrease was seen in three of the control.subjects. More improvement in the experimental subjects had been expected, but they did, in comparison to control subjects, have less decreases.

Results on the mental health self assessments were even less expected. From the first baseline until the end of the treatment, four of the experimental subjects and three of the control subjects reported feeling less mentally healthy. This will be discussed further in the subsection on Critique of the Measures.

Perhaps the largest measure of success of this treatment was evident during the first month of school the following Fall after the study was terminated. During this month, none of the treated subjects received any suspensions or detentions. All had excellent attendance and two were inquiring about college programs in their vocational fields. All of their attitudes, as expressed by their verbal speech, seemed remarkably positive.

In direct contrast, two of the control subjects had dropped out of the school. One other had missed one-third of the possible school days, and the two remaining both had had difficulties with teachers or had misbehaved, one of which resulted in a detention. Many of the researchers on social skills found similar improvements evident long after the training sessions were terminated (Polirtok and Greer, 1977; Madsen and Madsen, 1974; Oden and Asher, 1977).

Changes were made within each treatment session. The experimental subjects did work towards receiving the cigarette breaks, the refreshments, and the rock tee-shirt in each session. Perhaps by reducing the study's limitations, these new skills can have greater impact on the social effectiveness of the treatment program on the subjects involved.

Limitation of the Study

There were, of course, some limitations with this study. Some
of these limitations were that only ten subjects were studied. Since
a small sample was chosen, generalizations can not be be made. All
subjects were special needs, although none were below average or low
average intelligence. How successful this treatment would be with
similar and also divergent populations remains to be seen. Further
single subject studies need to be completed to corroborate these
findings. One of the strengths of the single subject design study is
that it is easy to add more subsequent data as changes are made in
both the treatment and the samples used.

Another problem was that all the subjects were already receiving
counseling. While this minimized some problems, such as the Hawthorne
Effect, and insured a high degree of study cooperation, it may have
shown more dramatic differences to have used uncounseled students for
a control group.

Another limiting factor of the study was that more effective
instruments were not chosen to measure general negative characteris-
tics of the student from the perspective of the vocational area
teacher and some other of the collateral behavior changes anticipated.
The Hahnemann's reliability was not available at the time of the study
or at its conclusion, but the results received in this study question
its effectiveness as a reliable measure.

The results of the mental health and happiness self rating scale

suggest another of the study's limitations. The subjects all showed less perceived happiness and mental health on the second baseline than on the first. Perhaps they had real discomfort rating themselves.

Previous experience with this rating scale may have minimized these phenomena. There may also be a more reliable measure available to use in assessing self perceptions on these two areas that could yield more significant results. More of the problems with each specific measure will be given in the next subsection.

Another problem was that because the study occurred at the end of the school year it was possible to obtain only one set of data for follow-up purposes. The study would have been most effectively started at the beginning of the school year. That earlier commencement date would have enabled a longer training, generalization and maintenance period. This longer time period would have also allowed a stronger follow-up study.

Critique of the Measures

The strongest, most reliable, and the most socially valid of the measures used was the percentage of school detentions per school days in session. Ultimately, this produced the most notable and the most hopeful of the results of this study. Mutually aversive reactions were definitely reduced between the experimental subject and the people responsible for giving detentions and suspensions within the system.

The experimenter-devised graphic rating scales of cooperation, rapport, positive behavior and acceptance of the consequences of their own behavior also effectively measured the social validity of the training for increased positive and neutral verbal statements. The perceived changes that occurred for the experimental subjects were predicted and this measure was sensitive enough to pick up these changes in the ratings of administrators and teachers on their collaborative behaviors.

The Hahnemann High School Behavior Rating Scale, used to measure overt behavior that reflected the students' overall adaptation to the demands of the classroom, was not effective in measuring any differences between the experimental and the control subjects. Its reliability and effectiveness not yet reported, must be questioned at least in this experimental context.

The sociometric indices may have supplied much better data had the number of the subjects' classmates during each assessment period had remained constant. This would need to be done before it could be determined if the trained change influenced their classmates' choice in response to the two sociometric questions assessed.

The experimenter-devised self rating scale of mental health and happiness measure was, as used, inadequate. This inadequacy might have been minimized by giving the subjects prior experience with it and thus time to feel comfortable with the self assessment of these two emotionally charged concepts. Another way of assessing if the training affected these areas would be to locate a standardized reli-

able instrument or instruments to measure both these concepts.

The Semantic Differential Scale provided some interesting data, especially from the perspective of Bem's Social Theory of Self Perception and Cognitive Dissonance Theory. The topic the subjects were not required to speak positively and neutrally about in experimental sessions had less apparent change than the practiced topics.

A difference was seen between the experimental and the control subjects on the treated topics but like the other less hard data it could have been eliminated from this particular study.

Ultimately and predictably the strongest and hardest measures showed the most differences in the experimental and the control subjects.

Suggested Further Research

This study may have produced more consistent results had the treatment period been longer and more intensive. It may also prove to be more effective if younger adolescents or more females are used. These two factors have been identified as having a positive effect on attitude change.

An area of suggested pursuit in the revision of this class of treatments would be to include the class peers and teachers in a similar but condensed treatment session with the targeted experimental subjects. This would include a session with a presented rationale

with the essential element (listed as Point #9 from the rationale
given in Appendix C), as "Look at the people you like the best among
the staff here. Look at the Ms. Carltons and the Ms. Costas. What
distinguishes them from the others is that they tend to look at the
positive or best in you. It's not as if they don't see the faults,
it's just that they don't concentrate on them." These classmates
would also receive practice and feedback in this session with rein-
forcement for increasing the positive and neutral verbal statements
and decreasing the negative statements. In addition, the targeted
subject would receive treatment sessions identical to those in this
study. As mentioned before, teachers could be notified to expect
change from the targeted student and also their classmates. These
remediations should insure a greater amount of positive changes over
the course of treatment for any targeted subject with little addi-
tional work for the researcher or practitioner.

These results may be more dramatic and further help to facilitate
a healthy, positive classroom climate, at least within the studied
setting.

Implications for the Practitioner

An important component of this study was the level of cooperation
each subject had with the researcher. A previously established rela-
tionship was probably essential to getting the experimental subjects
to commit themslves to behavior change and to getting the control

subjects to continue with the data gathering process. A similar strong relationship should be established before commencement with this type of treatment program.

Although this class of treatments was easy to administer, the counselor/practitioner could easily reduce these methods and probably retain much of the effectiveness of the mutually aversive responses which resulted in lowering the school detention rate. The most essential elements seemed to be the presentation of the cognitive behavior rationale presented in Appendix C and the actual practice, feedback and reinforcement provided as a result of the improved rate of making positive and neutral statements.

Data gathering could also be reduced substantially. The most essential piece of data was the rate of detentions and suspensions. Since this is available to most school counselors it could be assessed whenever convenient and recorded as a percentage of detentions per school days in session. Of course baseline and follow-up data would need to be rigorously attended to as in any single subject study of behavior change.

Determination of when generalization and maintenance could be begun would be determined individually by viewing the reduction in the rate of detentions. Older, male, and other resistant individuals could require more training sessions.

Further individualization could be made on choice of reinforcers. To avoid the Pygmalion effect but yet also increase the change expected by the self-fulfilling prophecy, teachers could be notified

to expect change in all of the students, not just the targeted stu-
dents.

    Creativity could yield many other ideas and suggestions to
maximize the likelihood that the techniques would be employed and
that beneficial results would occur.

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APPENDIX A

Consent Forms

Participant's Consent Form

1. I agree to participate in a study entitled, "The Effects of Social Skill Training and the Development of Positive and Neutral Verbal Statements." conducted by Melinda Rigney as part of her research at the University of Massachusetts, Amherst. I understand that the major objective of this study is to determine the effects of training more constructive, positive verbal statements.

2. I understand and agree with the following conditions regarding the collection and safeguarding of information collected by the study:

    a. There are no anticipated risks or discomfort by my participation.

    b. All information, written and tape recorded, will be recorded anonymously. No individual will be identifiable.

    c. My participation in this study is voluntary, and I may withdraw at any point.

    d. There will be compensation for cooperative participation in this study.

3. I understand that the results of this study will be shared with me.

4. If I have any questions about this study or its procedures, I may obtain more information by calling Melinda Rigney at work, (413) 283-9701 ext. 29 or writing to her at Pathfinder, Route 181, Palmer, Ma. 01069

_____

signature

_____

parental signature if under 18

APPENDIX B

Measures Forms

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Measures Form 1

Student _____

Please circle the description below that most accurately describes _____ today in your classroom/home. Please date and sign. Thank you.

Highly Cooperative	Cooperative	Neither Cooperative nor Uncooperative	Slightly Uncooperative	Highly Uncooperative
Very Positive/ Constructive	Constructive	Neither Constructive nor Destructive	Slightly Destructive	Highly Destructive
Excellent Rapport With Me	Good Rapport With Me	Neither Good nor Poor Rapport With Me	Poor Rapport With Me	Extremely Poor Rapport With Me
Excellent Rapport With Friends	Good Rapport With Friends	Neither Good nor Poor Rapport With Friends	Poor Rapport With Friends	Extremely Poor Rapport With Friends
Readily Accepts Consequences of Own Behavior	Accepts Consequences with Reservation	Neither Accepts Consequences nor Blames Others	Blames Others to Some Extent for Consequences of Own Behavior	Completely Blames Others for Consequences of Own Behavior

Signature _____   Date _____

Measures Form 2

HAHNEMANN HIGH SCHOOL (HHSB)
BEHAVIOR RATING SCALE*

George Spivack, Ph.D. and Marshall Swift, Ph.D.
Department of Mental Health Sciences
Hahnemann Medical College and Hospital, Philadelphia, Pa.

Student's Name_____Teacher's Name _____

Student's Sex _____ Age _____Grade _____School _____

Date of Rating_____ Subject _____ Mark Achieved _____

RATING GUIDE

1. Base rating on student's recent and current behavior.

Consider only the behavior of the student over the past month.

2. Compare the student with normal youngsters his age.

The standard for comparison should be the average youngster in the normal classroom situation.

3. Base rating on your own experience with the student.

Consider only your own impressions. As much as possible. ignore what others have said about the student and their impressions.

4. Consider each question independently.

Make no effort to describe a consistent behavioral picture or personality. It is known that youngsters may manifest seemingly contradictory behavior.

5. Avoid interpretations of "unconscious" motives and feelings.

As much as possible. base ratings on outward behavior you actually observe. Do not try to interpret what might be going on in the student's mind.

6. Use extreme ratings whenever warranted.

Avoid tending to rate near the middle of the scales. Make use of the full range offered by the scales.

7 Rate each item quickly.

If you are unable to reach a decision. go on to the next item and come back later to those you skipped.

8. Rate every question.

Attempt to rate each item. If you are unable to rate a particular item due to lack of information. circle the item number.

YOU ARE GOING TO RATE THE OVERT BEHAVIOR OF A STUDENT FOR ITEMS 1-22. USE THE RATING SCALE BELOW. WRITE YOUR RATING (NUMBER) FOR EACH ITEM IN THE BOX TO THE LEFT OF THE ITEM NUMBER.

Very frequently	Often	Occasionally	Rarely	Never
5	4	3	2	1

COMPARED WITH THE AVERAGE STUDENT IN THE NORMAL CLASSROOM SITUATION, HOW OFTEN DOES THE STUDENT . . .

1. Tell the teacher he is not capable of doing the work expected (i.e., underestimates his ability)?

2. Bring up other points of view in class so that they may be explored or discussed?

3. Ask questions in order to get more information about a subject?

4. Complain that the work is too hard?

5. Raise his hand to answer a question, or volunteer information?

6. Act physically restless in class or unable to sit still?

7. Seem critical (in a negative way) of the peers' opinions, questions or work in class?

8. Bring things to class that relate to a current topic?

9. Come in late to class?

10. Do more work than he is assigned (i.e., carries assignments beyond the minimal requirement)?

11. Express the feeling that too much work has been assigned?

12. Annoy or interfere with the work of his peers in class?

13. Speak disrespectfully to the teacher in class?

14. Participate actively in classroom discussions?

15. Have his work poorly organized (e.g., class notes, written assignments, etc.)?

16. Criticize, belittle or make derogatory remarks concerning the importance of the subject matter of the course?

17. Come to class having lost, forgotten or misplaced his books, pencil or other necessary class material?

18. Seem overly concerned that he has the correct directions (e.g., will check an assignment with a teacher after class, will ask that a direction be repeated or clarified, etc.)?

19. Fail to turn in assignments on time?

20. Engage the teacher in conversation just before or after class (e.g., about subject matter of courses, or mutual interests)?

21. Come up with original or unique thoughts in class which are unusual, but relevant?

22. Have to be reprimanded or controlled by the teacher because of his behavior in class?

FOR ITEMS 23-42 USE THE RATING SCALE BELOW:

Extremely	Distinctly	Quite a bit	Moderately	A little	Very Slightly	Not at all
7	6	5	4	3	2	1

COMPARED WITH THE AVERAGE STUDENT IN THE NORMAL CLASSROOM SITUATION, TO WHAT DEGREE IS THE STUDENT . . .

23. Liked by you as a person?

24. Outwardly nervous about taking tests?

25. Effective in applying a new principle he has learned to a new or unfamiliar problem?

26. Likely to quit or give up when something is difficult or demands more than usual effort on his part?

27. Reliant upon the teacher for directions and to be told how to do things or proceed in class?

28. Responsive or friendly in his relationship with the teacher in class (vs. being cool, detached or distant)?

29. A compulsive talker (i.e., can't refrain from talking to classmates)?

30. Quick to grasp a new concept that you present in class?

31. Prone to want the teacher to do all the work for him, or make things easy for him?

32. Swayed by the opinions of his peers in his class?

33. Very quiet, uncommunicative (e.g., responds to questions with monosyllables or a gesture)?

34. Effective in making inferences and working out answers for himself, when given the facts?

35. Oblivious to what is going on in class — is not "with it" — seems to be in his own "private," closed world?

36. Inconspicuous in class (i.e., you could easily forget he is there)?

37. Prone to feel he must master all of the details before he is satisfied he knows it?

38. Dogmatic or opinionated in the way he thinks?

39. Prone to want quick, "black" or "white" answers to questions?

40. Openly nervous during class (e.g., is physically tense, voice quivers, or fearful of teachers or classmates, etc.)?

41. Not receptive to others' opinions (e.g., doesn't "listen," interrupts others, etc.)?

42. Able to sift out the essential from the unessential in what he reads or hears in a lecture?

FOR ITEMS 43-45, USE THE RATING SCALE BELOW:

Extremely	Distinctly	Quite a bit	Moderately	A little	Very slightly	Not at all
7	6	5	4	3	2	1

COMPARED WITH THE AVERAGE STUDENT IN THE NORMAL CLASSROOM SITUATION, TO WHAT DEGREE DOES THE STUDENT . . .

43. Fluster, block, or become ill at ease when expressing himself verbally?

44. Lack social interaction with peers in class?

45. Prepare homework or project assignments in an interesting and original fashion?

HAHNEMANN HIGH SCHOOL (HHSB)
BEHAVIOR RATING SCALE*

George Spivack, Ph.D. and Marshall Swift, Ph.D.
Department of Mental Health Sciences
Hahnemann Medical College and Hospital, Philadelphia, Pa.

HHSB PROFILE

Student's Name _____ Teacher's Name _____

Student's Sex _____ Age _____ Grade _____ School _____

Date of Rating _____ Subject _____ Mark Achieved _____

Behavior Factor	Factor Item Raw Scores	Tot'l Raw Sc.	Raw Scores in Standard Score Units
1. Reasoning Ability	apply 25 ___ 34 ___ infers grasp 30 ___ 42 ___ sifts		REAS. ABIL
2. Originality	bring up 2 ___ 21 ___ thgts bring in 8 ___ 45 ___ homewk		ORIG
3. Verbal Interaction	aske 3 ___ 14 ___ discuss answrs 5 ___		VERBAL
4. Rapport with Teacher	engage 20 ___ 28 ___ friendly likeable 23 ___		RAPPORT
5. Anxious Producer	overwrk 10 ___ 37 ___ mastery dirctne 18 ___		ANXIOUS PROD
6. General Anxiety	tests 24 ___ 43 ___ recite generl 40 ___		GEN ANXIETY
7. Quiet-Withdrawn	uncom 33 ___ 36 ___ incnspc oblfv 35 ___ 44 ___ peer		QUIET WITHDR
8. Poor Work Habits	late 9 ___ 17 ___ forgets order 15 ___ 19 ___ late wk		WORK HABITS
9. Lack Intellectual Independence	quits 26 ___ 31 ___ tch EZ dirctne 27 ___ 32 ___ swayed		LACK INDEP
10. Dogmatic-Inflexible	dogmatic 38 ___ 41 ___ reject bl/white 39 ___		DOGMAT INFLEX
11. Verbal Negativism	peers 7 ___ 16 ___ aubl tchr 13 ___		VERBAL NEG
12. Disturbance-Restless	restless 6 ___ 22 ___ contrl annoy 12 ___ 29 ___ talk		DISTURB RESTLESS
13. Expressed Inability	I can't 1 ___ 11 ___ too much too hard 4 ___		EXPRESS INABIL

Measures Form 3

Student's Name _____

Shop _____

Please list, in order, students from your shop with whom would you most like:

    A.   To go with to morning and afternoon break.

        1. _____

        2. _____

        3. _____

    B.   To work with on an assigned project.

        1. _____

        2. _____

        3. _____

Please circle the number that best expresses how you feel today regarding both questions. Then sign and date the bottom of the page.

Measures Form 4

Extremely
Happy

1   2   3   4   5   6   7

Extremely
Unhappy

Extremely
Mentally Healthy

1   2   3   4   5   6   7

Extremely
Mentally Unhealthy

Signature _____   Date _____

Measures Form 5

Student's Name _____   Date _____

Please check the blank that best expresses how you feel about the topics presented. Thank you.

HOME

good	____:____:____:____:____:____:____	bad
cruel	____:____:____:____:____:____:____	kind
dissonant	____:____:____:____:____:____:____	harmonious
painful	____:____:____:____:____:____:____	pleasurable
clean	____:____:____:____:____:____:____	dirty
unimportant	____:____:____:____:____:____:____	important
incomplete	____:____:____:____:____:____:____	complete
positive	____:____:____:____:____:____:____	negative

SELF

good	____:____:____:____:____:____:____	bad
kind	____:____:____:____:____:____:____	cruel
ungrateful	____:____:____:____:____:____:____	grateful
unsociable	____:____:____:____:____:____:____	sociable
awkward	____:____:____:____:____:____:____	graceful
beautiful	____:____:____:____:____:____:____	ugly
successful	____:____:____:____:____:____:____	unsuccessful
negative	____:____:____:____:____:____:____	positive

SCHOOL

good	____:____:____:____:____:____:____	bad
kind	____:____:____:____:____:____:____	cruel
ungrateful	____:____:____:____:____:____:____	grateful
unsociable	____:____:____:____:____:____:____	sociable
foolish	____:____:____:____:____:____:____	wise
ugly	____:____:____:____:____:____:____	beautiful
healthy	____:____:____:____:____:____:____	unhealthy
selfish	____:____:____:____:____:____:____	unselfish
positive	____:____:____:____:____:____:____	negative

FRIENDS

good	____:____:____:____:____:____:____	bad
kind	____:____:____:____:____:____:____	cruel
meaningless	____:____:____:____:____:____:____	meaningful
unimportant	____:____:____:____:____:____:____	important
foolish	____:____:____:____:____:____:____	wise
clean	____:____:____:____:____:____:____	dirty
harmonious	____:____:____:____:____:____:____	dissonant
positive	____:____:____:____:____:____:____	negative

APPENDIX C

Study Rationale Outline

Study Rationale- This is an outline to be used to insure covering all necessary points. Language will be adapted to each individual's level of understanding.

1.   Being a teenager is extremely difficult. Everyone expects more of you now than they did a few years ago.

2.   When you were younger you accepted whatever happened even if it was bad. Now that you are a teenager you can make abstractions. You couldn't do this a few years ago. And now you can think more sophisticatedly and can see the discrepancy between what is and what should be.

3.   But that doesn't mean it be all negative. To have only negative feelings isn't healthy mentally. Those feelings make more troubled and make it difficult to develop positive, constructive ways of behaving. Negative attitudes, if prolonged can lead to anger and aggression.

4.   Positive feelings are conducive to feeling good about yourself. They influence how you look at the world and whether it is good and rewarding or bad and punishing.

5. Except in very difficult situations, emotionally healthy people look at things positively.

6. Specific training in specific language social skills has been shown to have people rate those trained higher on subjective behavior rating scales.

7.   Being increasingly positive can break mutually aversive reactions which often result in detentions and suspensions. They also result in fights and arguments with friends. .

8.   Practicing and getting feedback in positive and neutral behavior may improve more general attitudes.

9.   People who are positive are more likely to be included socially,get in less trouble with the law and stay in school. They also feel better. Look at the people you like the best among the staff here. Look at the Ms. Carltons and the Ms. Costas. What distinguishes them from the others is that they tend to look at the positive or best in you. Its not as if they don't see the faults it's just that they don't concentrate on them.

10. I'd like to include you in a study I am doing at UMASS. The study will help develop positive and neutral behavior. There will be no punishment only rewards. You can quit at any time if you don't like it. Please think about it.

APPENDIX D

Self Management Form

Student:
Task:
Dated from_____to_____
Program/Curriculum Area:

Detail:

Phase/Condition:

Start Time:

1 _____

2 _____

3 _____

4 _____

5 _____

6 _____

7 _____

_ _____

9 _____

10 _____

11 _____

12 _____

13 _____

14 _____

15 _____

16 _____

17 _____

18 _____

19 _____

20 _____

Total Try's:

Reinforcer:
Total Correct/
Total Incorrect:
Total Possible
Score:
Trials/Correct:

APPENDIX E

Transcripts of Verbal Models

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Transcripts of Verbal Models

Negative Statements

"I hate school"   STUDENT
"It is terrible here"   STUDENT
"It is just like a jail here"   STUDENT
"The kids here are a bunch of brats"   TEACHER
"The teachers are terrible"   STUDENT
"We never get to have any fun"   STUDENT
"The food is awful"   STUDENT

Neutral Statements

"I'd like to have more dances"   STUDENT
"I am a junior in agribusiness"   STUDENT
"I am going to change to cosemtology when I'm a junior" STUDENT
"I teach English"   TEACHER
"Most of my friends have a job after school"   STUDENT
"I have gym before lunch"   STUDENT
"I forgot my lunch money"   STUDENT

Positive Statements

"I really like my related teacher"   STUDENT
"The kids in my class are great"   TEACHER
"We have a lot of fun in my shop"   STUDENT
"There are a lot of cute boys in this school"   STUDENT
"I really think Ms. Costa and Ms. Carlton are
   great teachers"   STUDENT
"I'm really good at floral design"   STUDENT
"I'm really glad I'm at _____, not _____ High School" STUDENT