DOCUMENT RESUME

ED 063 538 CG 007 099

AUTHOR Christophersen, Edward R.; And Others

TITLE The Home Point System: Token Reinforcement Procedure

for Application by Parents of Children with Behavior

Problems.

INSTITUTION Kansas Univ., Lawrence.

PUB DATE 71
NOTE 39p.

EDRS PRICE MF-\$0.65 HC-\$3.29

DESCRIPTORS Crisis Therapy; *Family Counseling; Family Influence;

*Family Life; *Family Management; *Family Problems; Family Programs; Family Relationship; *Parent Child

Relationship

ABSTRACT

ERIC

Reported parent-child problems within the home are often composed of numerous instances in which the children refuse to help with household chores, bicker among themselves or engage in verbally inappropriate behavior toward the parents. Traditional family therapy, even when long-term, has not been notably successful in ameliorating these problems. Three sets of parents, with a total of six children between the ages of five and eleven, were taught to administer a token economy within their home, similar to the Achievement Place model. The parents received instruction in specifying desired social and chore behavior, communicated these behavioral goals to their children, took data on their occurrence and managed a point system. Data is reported on the measurement ind modification of fifteen problem behaviors in Family 1, five in Family 2 and six in Family 3. Multiple baseline and reversal researce designs were employed to demonstrate causality. All 26 behavior changes were rated as significant improvements by the parents. (Author)

60 200 **93**

The Home Point System: Token reinforcement procedures for application by parents of children with behavior problems

U.S. DEPARTMENT OF HEALTH,
EDUCATION & WELFARE
OFFICE OF EDUCATION
THIS DUCUMENT HAS BEEN REPRO
DUCE EXACTLY AS RECEIVED FROM
THE PERSON OR ORGANIZATION ORIGINATING IT PCINTS OF VIEW OR OPINIONS STATED DO NUT NECESSARILY
REPRESENT OFFICIAL OFFICE OF EDUCATION POSITION OR POLICY

Edward R. Christophersen, Caroline M. Arnold
Diane W. Hill and H. Robert Quilitch
University of Kansas

Abstract

Reported parent-child problems within the home are often composed of numerous instances in which the children refuse to help with household chores, bicker among each other or engage in verbally inappropriate behavior toward the parents. Traditional family therapy, even when long-term, has not been notably successful in ameliorating these problems. of parents, with a total of six children between the ages of five and eleven, were taught to administer a token economy within their home, similar to the Achievement Place model. The parents receive instruction in specifying desired social and chore behavior, communicate these behavioral goals to their children, take data on their occurrence and manage a point system. Data is reported on the measurement and modification of fifteen problem behaviors in Family 1, five in Family 2 and six in Family 3. Multiple baseline and reversal research designs were employed to demonstrate causality. twenty-six behavior changes were rated as significant improvements by the parents. These studies indicate that cooperative parents need only a small amount of professional help to learn to manage their children's behavior problems using reinforcers normally found within the home.



The Home Point System: Token reinforcement procedures for application by parents of children with behavior problems 1

Edward R. Christophersen, Caroline M. Arnold
Diane W. Hill and H. Robert Quilitch
University of Kansas

Robins (1966) in a longitudinal analysis of children referred to a child guidance clinic, emphasized that there is an apparent relationship between early-appearing antisocial behavior and later patterns of deviant behavior.

Moreover, she emphasized the importance of developing intervention techniques to deal with these childhood behavior problems. Levitt (1957, 1963) and deviants have indicated that the traditional child guidance procedures have not been demonstrated to be effective in ameliorating child behavior problems. Recently, there has been increasing evidence that a behavioral approach can be effective with these types of problems.

For example, several investigators have reported behavioral techniques for working with parents of children with behavior problems. These techniques include formal training in behavioral principles (Hall, Cristler, Cranston



The wish to thank Montrose M. Wolf for his suggestions throughout this research. The research was partially supported by grants (HD 03144) from the National Institute of Child Health and Human Development to the Bureau of Child Research, University of Kansas, the National Coordinating Center National Program on Early Childhood Education (CD-3-7-070706-3118) to the Kansas Center for Research in Early Childhood Education, and by a Grant from the U.S. Office of Education under the Education Professions Development Act, University of Kansas, TTT Program, Human Development. Reprints may be obtained from Edward R. Christophersen, Juniper Gardens Children Project, 2021 N. 3rd, Kansas City Kansas, 65101

and Tucker, 1970); Hall, Axelrod, Tyler, Grief, Jones and Robertson, 1971), reprogramming the social environment (Patterson, McNeal, Hawkins, and Phelps, 1967), behavioral contracting (Stuart, 1971), and training the parents in the home setting (Bernal, 1969; Hawkins, Peterson, Schweid, and Bijou, 1966; O' Leary O' Leary and Becker, 1967; Tharp and Wetzel, 1969; Wahler, Winkel, Peterson and Morrison, 1965; Wahler, 1969; and Zeilberger, Sampsen, and Sloane, 1968).

Phillips (1968) and Phillips, Phillips, Fixsen, and Wolf (1971), in studies of token reinforcement procedures with predelinquent boys, demonstrated the efficacy of such procedures in a home-style rehabilitation setting. In these studies, points, which were given by the house parents contingent upon specified appropriate behaviors and taken away for specified inappropriate behaviors, were redeemable for various privileges such as going home, watching TV, and riding bicycles. Many of the details involved in setting up a taken economy are clearly discussed in Ayllon and Azrin (1968).

ment Place model, for treatment of problem behaviors by parents within the home. The aim of this research was to develop and evaluate the effects of a token economy (based on naturally available reinforcers) in the home environment. Three families were included in the study with a slightly different program in each. Therefore the general home point system will be described and then each of the families will



be described.

General Procedure

Parent Training. Initially, through an office interview, the experimenter collaborated with the parents in an attempt to determine 1) what responsibilities (i.e., behaviors) would be considered appropriate, and 2) what privileges (i.e. reinforcers) the child, or children, would probably work for (cf. Tharp and Wetzel (1969) suggest the use of a questionnaire for identifying privileges). responsibilities and privileges were then specified in a written list drawn up by the parents. The experimenter prompted the parents to describe each of the behaviors and privileges in observable terms and the parents were asked to type several copies of the list for later use in the The actual assignment of points earned or points lost and the cost of each of the various privileges, while done primarily by the experimenter, was carried out while the parents were present and with their assistance. record keeping procedures were also arranged at this time.

With the exception of the second family, all meetings with the parents, after the initial interview, were conducted in the evening in the home, before the children had retired.

Reliability Checks. All primary observations were done by the respective parents, so that all of the data reported



herein were gathered by the parent(s). Occassionally one of the experimenters would come to the home in the evening, unannounced, for the purpose of making a series of observations with one or both of the parents. Therefore, each of the reliability figures for the three families is the agreement between the parent(s) and at least one outside observer.

The First Family

Subjects.

The three subjects in this study ere all members of the same family: a 9-year-old boy (George), an 8-year-old girl (Dollie) and a 5-year-old boy (Keith).

The 9-year-old boy was a good student academically but had some problem behaviors both at school and at home. He had begun skipping school, he rarely followed directions at home, and he had become particularly sassy toward his mother.

The 8-year-old girl had mild cerebal palsy and was in an educable mentally retarded class in the public school system. She had had extensive speech therapy and occupational therapy by the Doman-Delacatto method. At home, she was described as hyperactive, occasionally engaging in tantrum-like behavior.

The 5-year-old boy presented few behaviors problems.

The parents major complaint was his whining.

All three children engaged in bickering on frequent occasions. Bedtime was an occasion for giggling, talking,



5

and general "horseplay" by the two boys who shared a bedroom.

Target Behaviors.

Target behaviors were selected in maintenance (e.g. household chores) and social areas considered to be important by the paren's. The target behaviors were defined in writing, and posted for each child. Table 1 shows examples of behaviors which gained and/cr lost points and the privileges available. Each child had a 5"x 7" note card on which his points were added and subtracted. The card was divided in half with points earned, the left side along with what the points were earned for and who gave them. The right side contained similar information for points lost. At the end of the day, the points were totaled and the basic privileges were purchased. This assured a daily expenditure of points. If extra points were earned they could be spent on other activities or placed in the bank for large activities such as a movie or camping out.

Method.

Baseline data were taken on target behaviors for three weeks with no mention of the program to the children. The point system was then put into effect on the maintenance behaviors and on whining. No consequences were placed on the other behaviors although they were recorded daily.

Three social behaviors were then selected for each child. Point fines were then instituted using a multiple



baseline design across behaviors (cf. Baer, Wolf, and Risley, 1968). That is, baseline data were taken for three social behaviors for each of the three children. Then the point fines were put in for one of the behaviors for each child. When a behavior was scheduled for consequation, and when the behavior occurred, one of the parents would approach the child and tell him that he had been fined and what behavior he was fined for. After approximately two weeks, the point fines were put in for a second behavior for each child and two weeks later the point fines were in effect for all three social behaviors.

Parent Training consisted of viewing the Achievement Place film² and reading and discussing several of the Achievement Place articles. Total interaction time with this family was approximately 10 hours.

The point system was in effect for this family for approximately four months. The data reported herein are from approximately 68 days during this period. On four different days, 124 reliability checks were made on 17 different behaviors. Overall reliability averaged 93%.

Results.

Figures 1, 2, and 3 show the multiple baseline analysis, across three social behaviors for each of the three



^{2&}quot;Achievement Place", 30 min, 16 mm black and white, sound. Available from: The University of Kansas, Bureau of Visual Instruction, 6 Bailey Hall, Lawrence, Kansas 66044

children. For George, Fig. 1, bickering was at approximately five episodes per day during baseline and dropped to approximately once a day after the 10 point fine was put into effect. The number of times that he was observed to be violating the bedtime rule during baseline was approximately four per day prior to the fines and one per day after the fines. His teasing behavior occurred about four times per day during baseline and dropped to one or zero after the fining procedure was instituted.

The arrows on the figure represent the time at which the point system went into effect for the maintenance behaviors. The children reported that they thought they would lose points for bickering, teasing, etc. When informed by the parents that this was not the case the behaviors returned to the earlier high rate.

Similar data were obtained for Dollie (Fig. 2) and Keith (Fig. 3).

Figure 4 shows the baseline data for two maintenance behaviors for each of the three children. When the point system was put into effect all three children began performing their respective maintenance tasks on a daily basis.

DISCUSSION

These data demonstrate that the point system was functional for increasing the maintenance behaviors for each of the three children. The multiple baseline an-



alysis shows that, where baseline data are available on social behaviors, the point system is functional for decreasing those behaviors labeled as inappropriate by the parents.

While the data from this family included baseline performance on each of the behaviors prior to the introduction of any point contingencies, it is unclear whether the increased performance resulted from the points or merely from the greatly increased amount of feedback that the children were now getting from their parents. The procedures with the third family were designed to look specifically at whether feedback alone would increase performance, or if some reinforcer was necessary in addition to the feedback.

The Second Family

Subject.

Eddie was 11 years old at the start of this program.

His school records reported an above average I.Q. and indicated that he was performing below his grade placement. On Eddie's report card his teacher described him as lacking in: 1) self-control, 2) cooperation at work and play, 3) responsibility and 4) dependability.

Eddie lived with his divorced mother but frequently spent weekends with his father and step-mother. Both parents were experiencing difficulties in having him follow



directions and in completing assigned tasks. His reply might be, "My Mom (or my Dad) doesn't make me do that," whichever expression fit the occasion.

Target Behaviors.

Target behaviors were selected in maintainance, social and academic areas. The behaviors selected were considered to be important to the child in the current environment and to be necessary to facilitate a more appropriate adjustment to school in September. A requirement was that a target behavior had to be definable in terms of observable events and measurable with a high degree of inter-observer agreement. These target behaviors had to be defined so that they were explicit and within the limits of the child.

Points were used to bridge the delay between the target behavior and the reinforcing events. Eddie gained points for specific appropriate behaviors and lost points for specific inappropriate behaviors. Points were recorded in a log each ong by Eddie under the supervision of his mother. This provided an opportunity for immediate counseling regarding his behavior and assured the child recognition of his accomplishments.

Items and events that were readily available in the home and which seemed important to Eddie were used for delayed reinforcers. These activities were available in the form of license which Eddie had to purchase for a spec-



activities was determined by the net gain of points he acquired each day; the number of points lost was subtracted from the number of points gained to derive the net gain per day. Only if he accumulated the required number of points could he purchase a license for the next day. Eddie was required to purchase a license for each of the privileges he wanted each day. The licenses that were purchased were posted on the bulletin board next to the list of responsibilities. The cost of the licenses varied from 35 points per half hour for playing with friends to 600 points for special occasions such as movies. Some of the licenses available are shown in Table 2.

The price of the licenses remained relatively constant from week to week. The economy of the system was designed in such a manner that if Eddie performed all the tasks expected of him and lost a minimum of points, he would have adequate points to watch T.V., play with friends and ride his bicycle. In order to go to movies, go to the park, or take weekend trips, he would have to perform extra tasks.

Most of the behaviors which carned or lost points were formalized and explicit to the extent that a copy of them was posted on his bulletin board. Rewards and fines ranged from 10 to 250 points per behavior. Some of the behaviors and points are indicated in Table 2. A few other contingencies were less formalized but still resulted in point



consequences.

For this family, the parent training consisted of viewing the Achievement Place film and reading and discussing Phillips (1968). Total interaction time with the family was approximately 15 hours.

The point system was in effect for this family for approximately 14 months. The data reported herein are from approximately four months during this period. On 12 different days 74 reliability checks were made on 29 different behaviors with an average agreement of 88%.

EXPERIMENT I

EMPTY GARBAGE CANS

PROCEDURE AND RESULTS

Prior to this experiment, Eddie only emptied the garbage when directed to do so. Therefore Eddie was instructed in advance that each day he would be responsible for emptying all garbage cans daily. No exact time for this was specified.

RESPONSE DEFINITION

The exact response definition for EMPTY GARBAGE CANS was: "Empty all garbage cans into an empty sac and place in container in garage." The garbage cans were checked by visual inspection.



CONDITIONS

10 point fine: A fine of 10 points per day was made contingent upon any single garbage can not being emptied during the day. Eddie was given no verbal reminders during the day.

Free points: Eddie was informed that no points would be deducted when the garbage cans were not emptied. The 10 points were earned regardless of whether or not Eddie emptied the garbage.

Mo points: Eddie was informed that he would neither lose points if the garbage cans were not emptied nor would he gain points if they were emptied.

10 point fine: Eddie was again informed that he would be fined 10 points each day if the garbage cans were not emptied.

Figure 5 demonstrates that there was an increase in the appropriate behavior when the 10 point fine was in effect. The appropriate behavior continued when no fine was contingent upon the behavior. When no points were gained or lost for the behavior, the number of appropriate responses decreased. When the 10 point fine was reinstated, his garbage enptying behavior increased.

EXPERIMENT II

VACATION FROM THE POINT SYSTEM

In order to demonstrate the function of the points in maintaining Eddie's various behaviors, a "vacation" was ar-



ranged. That is, Eddie was told he could carn time off of the point system (a vacation) contingent on the grades on he icpational; 2 days for each A and 1 day for each B, on his report sard.

The received three A's and three B's so he had earned a total of 9 days vacation, 6 of which were taken together. While this phase of the study was a vacation for Eddie in that all privileges were available noncontingently, it provided an opportunity to examine the necessity of the privileges for maintaining the various behaviors. During this time, no points were gained or lost and no licenses were needed, although Eddie's mother continued to record each of the defined behaviors.

RESULTS

Fig. 6 shows the effects of the vacation on various maintenance and social behaviors. During the vacation, all five of the maintenance behaviors dropped to zero, and upon reinstatement of the point system returned to the earlier level. The S's social behaviors, however, did not show a similar effect. During the vacation, the social behaviors were maintained without the point system.

DISCUSSION

These data have demonstrated the necessity of the point system for maintaining Eddie's maintenance behaviors. Our informal observations of Eddie's social behaviors before the



introduction of the point system suggested that the social behaviors before the introduction of the point system examined in this study were originally at a low level. Nevertheless, after Eddie had been on the point system for 8 months, the points did not appear to be necessary for maintaining Eddie's social behaviors. Because there were no baseline data taken and because no relation was found between the points and the maintenance of these social behaviors, the role that the point system played in the acquisition of the social behaviors is unclear.

SCHOOL PERFORMANCE

Although it is difficult to draw any conclusions from the grades that teachers assign to a pupil's report card, the data in Figure 7 indicates that there probably was not any deterioration in Eddie's school performance during, or after the removal of, the point system. The upper part of Fig. 7 indicates the number of classroom skills checked unsatisfactory out of a total of eleven for each grading period. Classroom skills are not rated in the 7th grade; hence no data are reported for the 7th grade classroom skills.

Eddie's teacher in 5th grade reported that he was improving toward the end of the year. His 6th grade teacher was very pleased with his performance, as was his 7th grade teacher.



FOLICY UP

Approximately five months after the point system had been completely removed, the experimenters contacted the mother and asked that, without telling Eddie, she record his behavior in the original ledger for a week or so as follow up data. Four reliability checks taken during this time yieled 83% agreement between observers. Figure 6 shows that three of the five maintenance behaviors were higher than during the earlier vacation, although not quite as high as when the point system was in effect. Two of the social behaviors maintained at the same level as during the point system. The mother reported that, although Eddie's social behaviors had remained at a level acceptable to her, she was just about to reinstitute a small point system for some of his maintenance behaviors.

The Third Family

Subjects.

The two subjects in this family were a seven-year-old boy (Robin) and a ten-year-old girl (Teresa). Neither child had experienced unusual physical or social problems in the past. Both were in the appropriate grade for their age.

Both parents reported difficulties in getting the children to do their household chores. The father would usually ignore the chore problem, but occasionally became angry with



the children over the fact that they were not "doing their share." The mother wanted some help around the house and felt that the children should help, but she would frequently make excuses for the children not doing their chores. Both parents contracted with the author to experiment with a new system to maintain chore behaviors on the part of the childron.

Marget Behaviors.

In collaboration with the parents, a list of chores, three for each child, was drawn up. These chores were defined in writing and posted on each child's bedroom door. For Robin, the three chores chosen were: make bed, straighten room, and take out kitchen trash. For Teresa, the three chores were: make bed, straighten room, and do evening dishes. An example of one of the response definitions for Robin was exactly as follows: "making bed includes 1) the visible portion of the sheet must be wrinkle-free, 2) the bedspread must be on the bed, wrinkle-free, 3) the bedspread must fall within two inches of the floor, without touching the floor,

on the two visible sides of the bed."

Procedures.

Initially, each child was verbally instructed to do each chore with the mother and the therapist present. If either child had difficulty completing the assigned task,



he was shown the correct way of carrying out his chore until he could complete it to criteria unaided. In this way it was demonstrated that the children knew how to carry out their chores.

A form was devised for daily chore inspection whereby the inspector (usually the mother) could check each child's daily performance. For convenience sake, all chores were inspected at the same time every day (at 9 pm), seven days a week, unless the family happened to be away from their home. When the family was away from home, the inspections were not performed. This daily chore form was designed to be filled out in a simple yes/no fashion. There was one daily form for each child with two daily check lists on each form, on the left and right hand sides, such that the inspector could fill out both sides of the form, tear it in half and have one copy to leave for the child, hen appropriate, and one copy to keep.

Parent training consisted entirely of discussions with the parents. Total interaction time was approximately 10 hours.

EXPERIMENTAL CONDITIONS:

Baseline: The children were told by their mother on the first day of this condition to do their chores every day.

A list of specific chores had been posted on each of the children's bedroom doors the day before. This occurred after it



had been determined that each of the children could actually do each chore satisfactorily and was capable of reading the chore list. A daily inspection of all six chores was begun and records kept. This condition lasted nine days for Robin and thirteen days for Teresa.

Feedback: During this period one half the daily chore report card was left on the pillow of each child's bed after the mother had made her inspection and filled the form out so that it indicated how many of each child's chores had been completed. This condition lasted eight days for Robin and Teresa.

Stars: On the first day of this condition the children were told that a gold star would be glued to their daily chore report card beside the name of each chore successfully completed. A gold star was placed at the top of each child's "daily chore report card" on the first day to insure that both children came in contact with this potential reinforcer. This condition lasted eight days for Robin and eleven days for Teresa.

Money: On the first day of this condition both children were told by the mother that they were to receive 10¢ for each chore completed satisfactorily. This money would be left in cash on their daily report cards which were placed on their beds. This condition lasted twelve days for Robin and eight days for Teresa.



19

On the first day of this condition both children Bonus: were told by their mother that they would receive a bonus for doing consecutive chores. It was explained that from now on Robin would receive 2¢ per daily chore and 58¢ bonus if he did all his chores for seven consecutive days. Thus, doing all his chores for a week would net him \$1.00. Teresa was told that she would receive 5¢ per chore and a bonus of \$1.00 for doing all her chores for seven consecutive days, thus receiving a total of \$2.05 for a week's chores. The figures for the bonus condition were decided on the basis of the child's previous allowance. This condition lasted sixteen days for Robin and twenty-two days for Teresa. (NOTE: this figure of days per condition exludes days when one or both children were out of the home). Also, up to this time all the conditions were cumulative and never dropped once they were put into effect, i.e. the feedback reports, the stars, and the money. These were all dropped at the beginning of the next condition.

Point System: On the first day of this condition both children were told that they would receive 500 points per chore completed. They were both given 1500 points on the first day. They were given point cards to carry, so as to accumulate and spend points. Prices for various activities were as follows:

License to use bicycle daily Play out of home Watch TV

500 pts.

200 pts. per hour 200 pts. per hour



In addition, they were told they could be fined 100 points for not doing what they were told to do at home. During this condition both children were provided ways to earn money which were unrelated to their chores or the point system.

No Points: On the rirst day of this condition both children were told that they had been doing so well with their chores that the point system would be discontinued. Free access to all privileges was provided. They were told, however, to continue doing their daily chores. This condition lasted eight days for Robin and Teresa. Chores were still inspected daily.

Point System: Both children were told that the point system was being reinstated. It was set up exactly as during the previous point system condition. This condition lasted ten days for both children.

RESULTS

During the baseline condition (Fig. 8) Robin did not complete any of his chores, while Teresa did 1 or 2% of the possible total. With the introduction of the feedback, Robin still did not do any chores, while Teresa completed 4% of hers. Under the Star condition, Robin completed 12% and Teresa 6% of their chores. Under each of these three conditions, then, the chore performance was minimal—a total of seven chores completed of a possible 171. With the 10¢



contingency, Robin completed 47% of his chores and Teresa completed 54% of hers. Chore completion increased again with the Bonus condition in which Robin completed 87% of his chores, while Teresa completed 68% of hers. Chores completed dropped with the advent of the Point system to a total of 59% for Robin and 45% for Teresa. During the reversal, chores dropped dramatically to 8% for Robin and 4% for Teresa. When points were reinstated over the next ten days, Robin completed 47% of his chores and Teresa 60% of hers.

RELIABILITY

During the entire experiment 624 maintenance behaviors were inspected, mainly by the mother, over a total of 105 days. Reliability observations of 102 chores were made by the E over a total of 18 different days. Reliability was checked as least once in each of the first six conditions. Overall reliability averaged 90%.

DISCUSSION

One point explored in the third family was whether feedback to the children on their performance could raise the probability of the chores being done. With the two children, neither the feedback nor the star condition was sufficient to increase the child's performance. However, both the money (including the bonus) and the point system were effective for maintaining chore performance. Although



22

the money appeared to be slightly more effective than the point system, the point system was instituted at no increase in cost to the parents.

GENERAL DISCUSSION

The data from these three families have demonstrated that with apparently cooperative and motivated parents, it is effective for the parents to institute a point system based on reinforcers available naturally within the home. With no formal training in behavioral principles and with relatively little contact with the professional therapist, each of these families was able to implement a point system for modifying behaviors which were concern to the parents.

These results are in agreement with the results reported by Phillips (1968) and Phillips, et al. (1971) and extend, within limits, the Achievement Place model to include private families in consultation with a professional therapist.

Tt bears mentioning here that none of these families
was experiencing severely inappropriate behaviors. The
effectiveness of the point system with such behaviors in a
private home has yet to be investigated. In the face of
available alternatives for treatment, the extension of the
point system to more severe behavior problems seems plausible.

In this study, as in Hawkins, et al. (1966), all of the families were cooperative in that they implemented the tech-



niques suggested by the therapists. In one family, not reported here, where the parents sometimes refused to allow
their child any of her earned privileges, the point system
was almost completely ineffective. The cooperation of the
family may be a very important variable in the success of
home point system.



Figure Captions

- Figure 1. Multiple baseline analysis of the effects of the effects of the effects of introducing point fines on social behaviors of a 9-year-old boy. The arrows indicate when the point system was instituted for maintenance behaviors.
- Figure 2. Multiple baseline analysis of the effects of introducing point fines on social behaviors of a 5-year-old boy. The arrows indicates when the point system was instituted for maintenance behaviors.
- Figure 3. Multiple baseline analysis of the effects of introducing point fines on social behaviors of an 8-year-old girl. The arrows indicate when the point system was instituted for maintenance behaviors.
- Figure 4. The effects of introducing a point system for maintenance behaviors of three children (5, 8 and 9 years old) simultaneously.
- Figure 5. Mean number of appropriate responses under each condition.
- The effects of removing the point system (Vacation) on maintenance and social behaviors of an 11-year-old boy, and follow-up data on these some behaviors 5 months after the complete removal of the point system.
- Figure 7. The number of classroom skills checked unsatisfactory (on the child's report card) and the average grade prior to the introduction of, during, and after the removal of the point system. Classroom skills are not rated in the 7th grade, hence no data are reported for 7th grade classroom skills.
- Figure 8. Multiple baseline analysis across two siblings (7-year-old boy and 10-year-old girl) of the effects of feedback, stars, and money on baseline maintenance behaviors (third family).



Table Captions

- Table 1. A partial list of behaviors and the number of points they gained or lost and a partial list of the activities for which licenses were available and the price in points (first family).
- Table 2. A partial list of behaviors and the number of points they gained or lost and a partial list of the activities for which licenses were available and the price in points (second family).



References

- Ayllon, T. and Azrin, M.H. The Moken Economy: a motivational system for therapy and rehabilitation. New York:
 Appleton Century-Crafts, 1968.
- Baer, D.M., Wolf, M.M., and Risley, T.R. Some current dimensions of applied behavior analysis. Journal of Applied Behavior Analysis, 1968, 1, 91-97.
- Bernal, M.E. Behavioral feedback in the modification of brat behavior. The Journal of Mervous and Mental Disease, 1969, 148, 375-385.
- Hall, R.V., Axelrod, S., Tyler, L., Grief, E., Jones, F.C., Robertson, R. Modification of Behavior Problems in the Home with a Parent as Observer and Experimenter. In press, Journal of Applied Behavior Analysis.
- Hall, R.V., Cristler, C., Cranston, S.S., and Tucker, B.

 Teachers and parents as researchers using multiple baseline designs. Journal of Applied Behavior Analysis, 1970, 4, 247-255.
- Hawkins, F.P., Peterson, R.F., Schweid, E. and Bijou, S.W. Behavior therapy in the home: amelioration of problem parent-child relations with the parent in a therapeutic role. <u>Journal of Experimental Child Psychology</u>, 1966, 4, 99-107.
- Levitt, E.E. Psychotherapy with children: a further evaluation. Behavior Research and therapy, 1963, 1, 45-51.
- Levitt, E.E. The results of psychotherapy with children: an evaluation. <u>Journal of Consulting Psychology</u>, 1957, 21 (3), 189-196.
- O'Leary, K.D., O'Leary, S., and Becker, W.C. Modification of a deviant sibling interaction pattern in the home.

 Behavior Research and Thorapy, 1967, 5, 113-120.
- Patterson, G.R., McNeal, S., Hawkins, N., and Phelps, R.

 Reprogramming the social environment. Journal of
 Child Psychology and Psychiatry, 1967, 8, 181-195.
- Phillips, E.L. Achievement Place: token reinforcement procedures in a home-style rehabilitation setting for "pre-delinquent" boys. Journal of Applied Behavior Analysis, 1968, 1, 213-223.



- Phillips, E.L., Phillips, E.A., Fixsen, D.L., Wolf, M.M. Achievement Place: Modification of the Behavior of Pre-Delinquent Boys within a Token Economy.

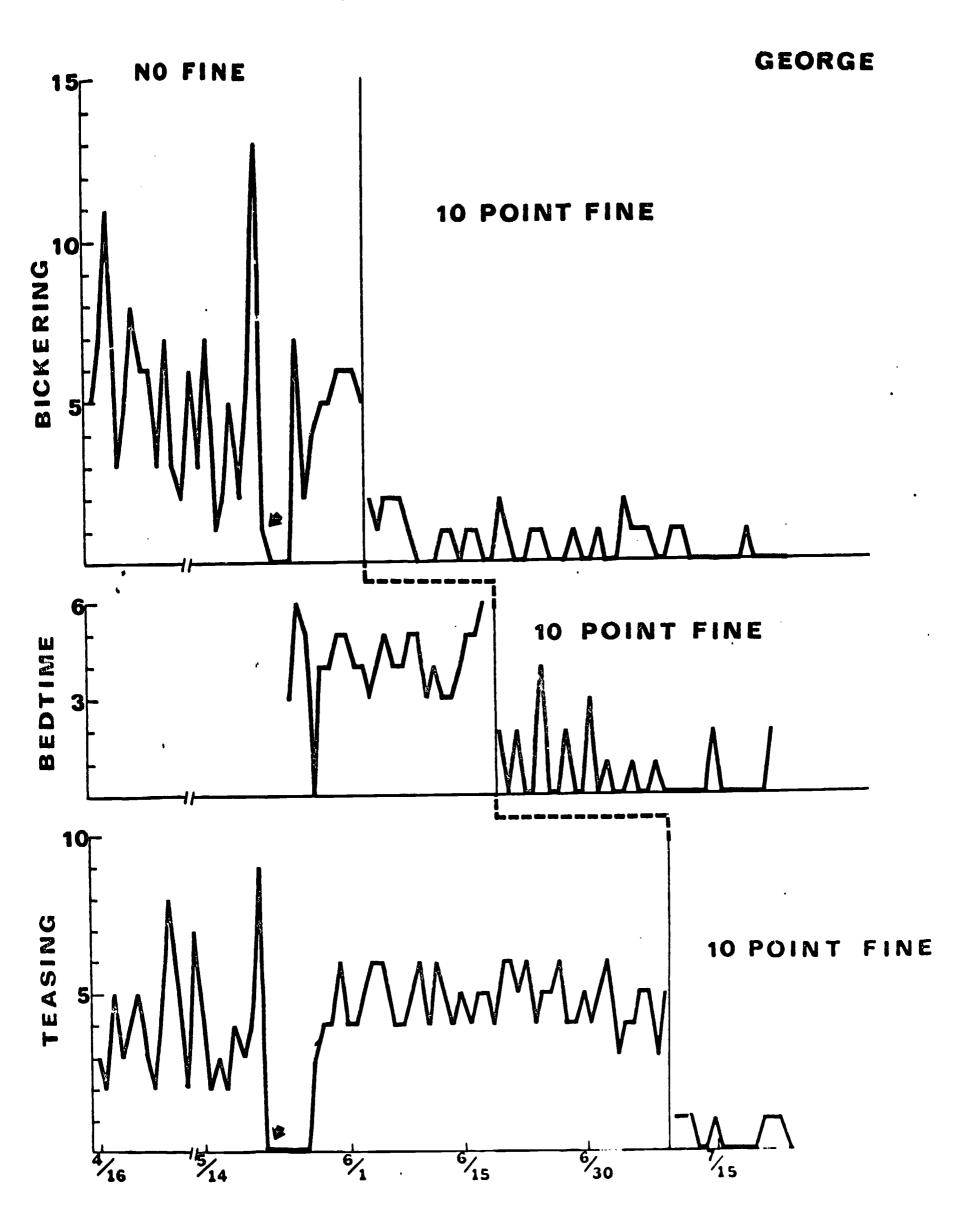
 Journal of Applied Benavior Analysis, 1971, 4, 45-59.
- Robins, L.N. <u>Deviant Children Grown Up</u>. Baltimore: The Williams and Wilkins Co., 1966.
- Stuart, R.B. Behavioral contracting within the families of delinquents. Journal of Experimental Psychiatry and Behavior Therapy. In press, 1971.
- Tharp, R.G. and Wetzel, R.J. Behavior modification in the natural environment. New York: Academic Press, Inc. 1969.
- Wahler, R.G. Oppositional children: A quest of parental reinforcement control. <u>Journal of Applied Behavior Analysis</u>, 1969, 2, 159-170.
- Wahler, R.G., Winkel, G.H., Peterson, R.F. and Morrison, D.C. Mothers as behaviors therapists for their own children. Behavior Research and Thorapy, 1965, 3, 113-134.
- Zeilberger, J., Sampen, S.E., and Sloane, H.N. Modification of a child's problem behaviors in the home with the mother as therapist. Journal of Applied Behavior Analysis, 1968, 1, 47-53.
- Eysenck, H.J. The effects of psychotherapy. In: Handbook of Abnormal Psychology. New York: Basic Books, 1960.

28

*

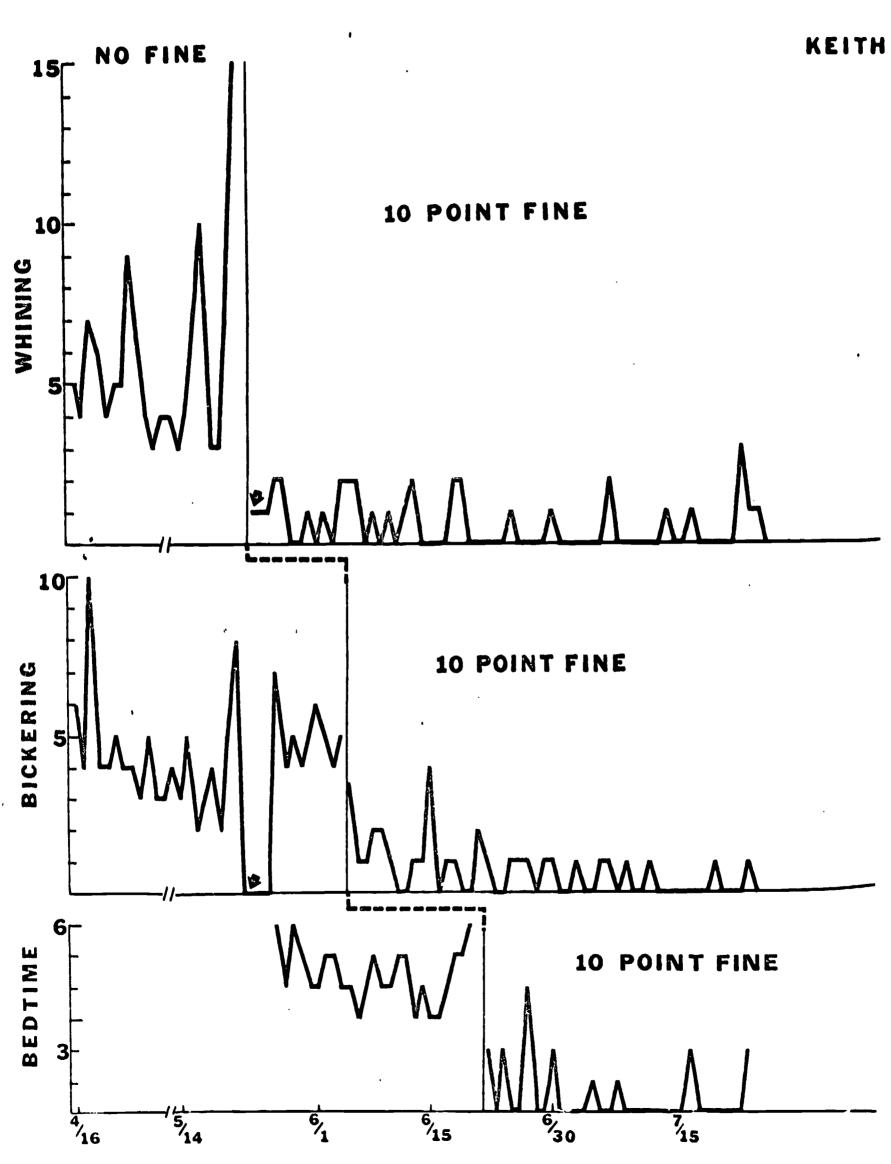
	LICENSES AVAILABLE	PRICE IN POINTS
	BASIC PRIVILEGES DRIVE-IN MOVIE PICNIC	60 200 50
	BEHAVIORS THAT EARNED AND LOST POINTS	POINTS EARNED OR LOST
GEORGE	1) MAKE BEDS 2) HANG UP CLOTHES	10 20
KEITH	3) EMPTY TRASH	20
DOLLIE ,	, 4) MAKE BED 5) FEED CAT 6) BATHE	20 20 20
	BEHAVIORS THAT EARNED POINTS	POINTS EARNED
	1) SWEEP RUG 2) CLEAN BATHROOM 3) ANSWER TELEPHONE	10 20 15
	BEHAVIORS THAT LOST POINTS	POINTS LOST
	1) BICKERING 2) TEASING 3) WHINING	10 EACH OCCURANCE 10 10

Attanil •

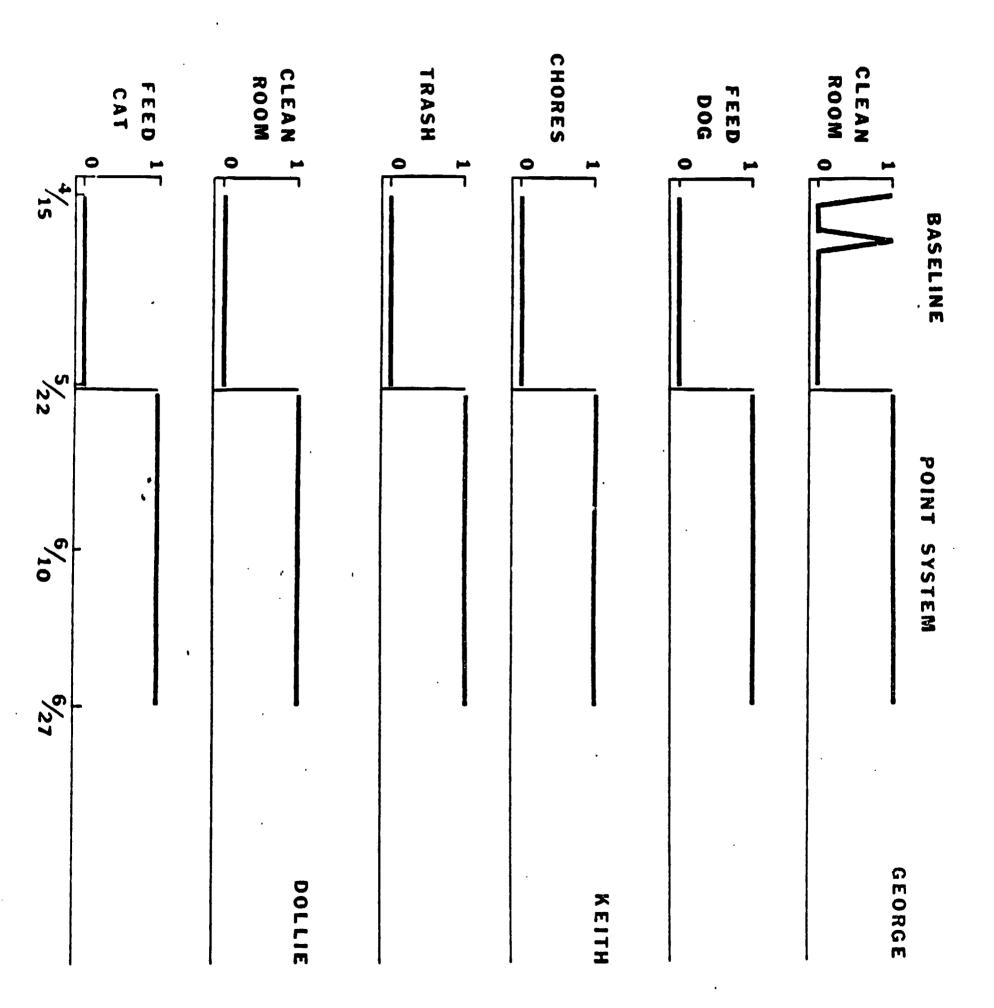


DOLLIE WHINING 10 BICKERING JUMPING ON FURNITURE //5/₁₄ 4/16 6/1 6/15 1/15 ⁶/30

M. 177





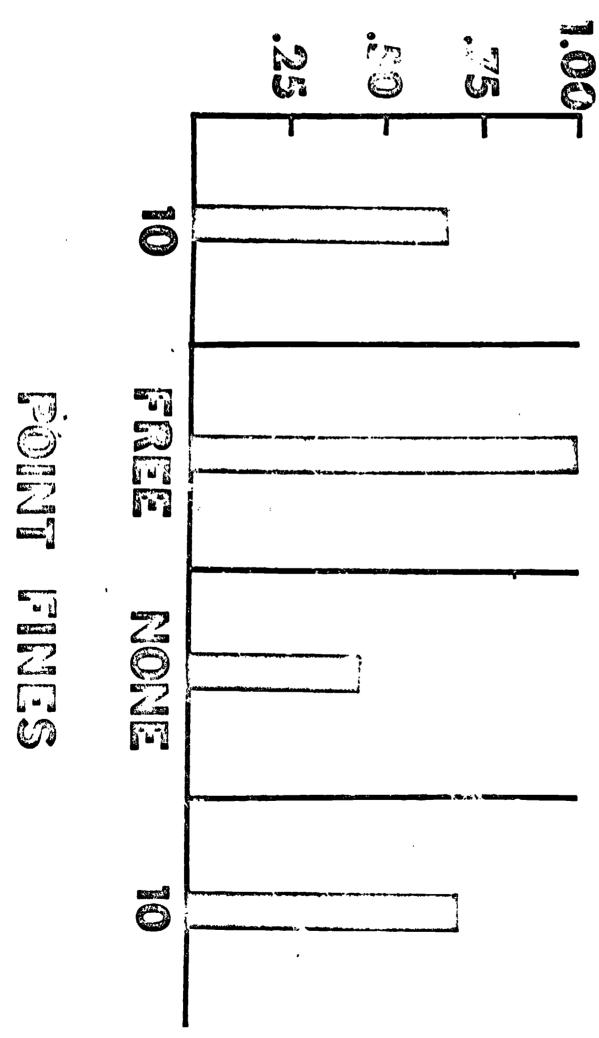




LICENSES AVAILABLE	PRICE IN POINTS
SPECIAL OCCASIONS LUNCH WITH FRIENDS SWIMMING WATCHING T.V. PLAYING WITH FRIENDS BICYCLE	600 POINTS 200 POINTS 50 POINTS PER HALF HOUR 45 POINTS PER HALF HOUR 35 POINTS PER HALF HOUR 50 POINTS PER DAY
BEHAVIORS THAT EARNED AND LOST POINTS	POINTS EARNED LOST
1) BATH AND READY FOR BED 2) HOME AT SPECIFIED TIME 3) RETURN ARTICLES TO PROPER 1 _ACE 4) POLISH SHOES	40 40 15 30 10 10 20 20
BEHAVIORS THAT EARNED POINTS	POINTS EARNED
1) READ!NG 2) VOLUNTEERING EXTRA ASSISTANCE 3) HOUSEHOLD CLEANING 4) WASHING CAR	50 POINTS PER HALF HOUR 25 - 100 50 - 200 75 - 250
BEHAVIORS THAT LOST POINTS	POINTS LOST
1) INTERRUPTING ADULTS 2) FAILURE TO DO ASSIGNED TASKS 3) FAILURE TO TURN OFF LIGHTS	50 50 25



MEAN NUMBER OF APPROPRIATE RESPONSES

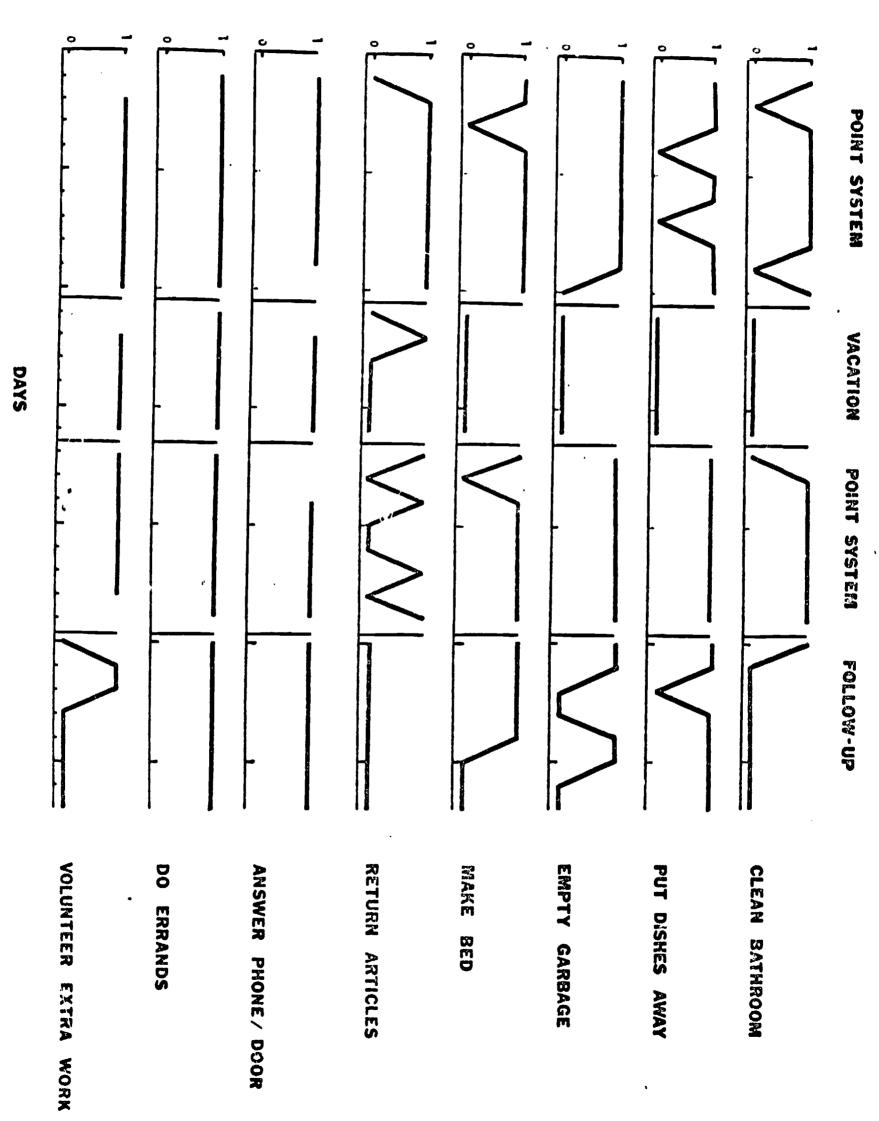


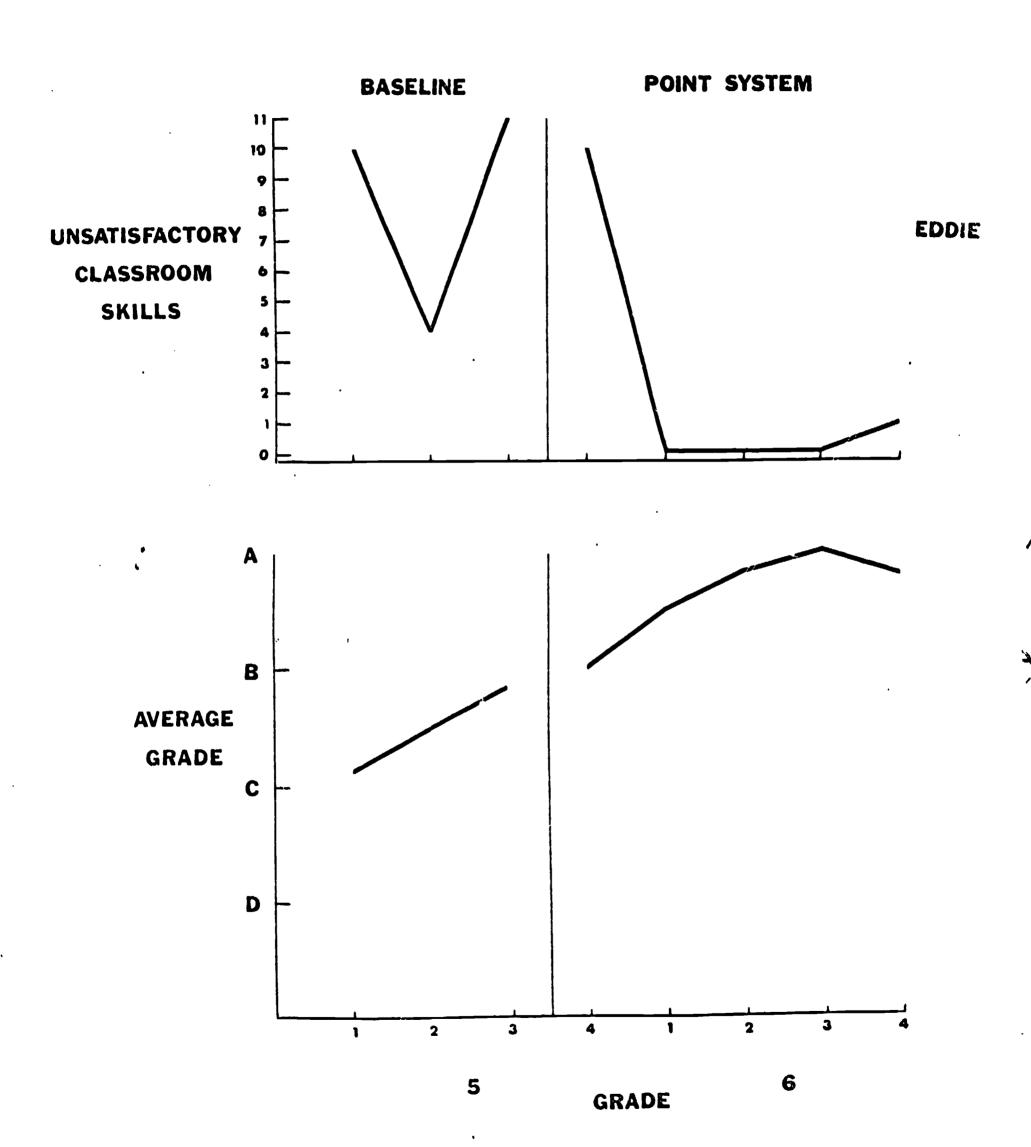
implying Carbege

ERIC Full text Provided by ERIC

SOCIAL BEHAVIORS

MAINTENANCE BEHAVIORS







CHORES DONE PER DAY **√**,∞ DAYS 6[']9 PTS.