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ABSTRACT

Between 1961 and 1971 a systematic series of investigations aimed at developing social-learning-based home intervention procedures for the treatment of hyper-aggressive children was carried out. As a result of this series of studies, a set of social learning techniques were developed, articulated, and cross-validated. The data from these experiments indicated that highly aggressive, pre-adolescent boys could be treated effectively in their homes by training their parents to use social learning child management procedures at an average cost of 25 to 28 professional hours per family. This paper; (1) describes some differences observed among stealers, non-stealers, and a control sample; (2) compares parents of these stealers, non stealers, and controls; and (3) describes the initial impressions of a new treatment sample of children whose primary referral problem was stealing rather than social aggression. (Author)

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Basic Research in the Behavioral Sciences

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of Direct Home Intervention for [illegible]
of Predelinquent Boys who Steal

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and
[illegible] Hendriks

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A Preliminary Analysis of the Effectiveness of Direct Home Intervention for Treatment of Predelinquent Boys who Steal[1]

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Oregon Research Institute

Between 1967 and 1971, Patterson and his colleagues at Oregon Research Institute carried out a systematic series of investigations aimed at developing social-learning-based home intervention procedures for the treatment of hyper-aggressive children (e.g., Patterson & Reid, 1972; Patterson, McNeal, Hawkins, & Phelps, 1967; Patterson, Cobb, & Ray, 1972; Patterson, Ray, & Shaw, 1968; Patterson & Reid, 1970). As a result of this series of studies, a set of social learning techniques were developed, articulated, and cross-validated. The data from these experiments indicated that highly aggressive, pre-adolescent boys could be treated effectively in their homes by training their parents to use social learning child management procedures at an average cost of 25 to 28 professional hours per family.

An analysis of all treatment cases for whom complete and high-quality home observation data are available at least through termination of treatment (N = 25) revealed that although the intervention was quite effective on the average, those boys who were reported to steal (N = 14) were helped less by the project than were those boys who were not reported to steal (N = 11).[2]

It is the purpose of this paper (1) to describe some differences observed among stealers, non-stealers, and a group of matched controls in the 1967-1971 sample; (2) to compare the parents of these stealers,

non-stealers, and controls; and (3) to describe our initial impressions of a new treatment sample of children whose primary referral problem was stealing rather than social aggression. No attempt will be made to present a set of engineering procedures for the modification of stealing behavior. Rather, an attempt will be made to suggest some directions in which we are moving in the search for a set of such procedures.

Subjects

Subjects included 54 families studied at Oregon Research Institute between 1967 and 1971.

A. Treated families (N = 27): Each of these families was referred for treatment because at least one male child was reported to be exhibiting high rates of aggressive behavior. During intake screening, 14 boys were reported to steal and 13 were not. The behavior of each member of the 27 families was coded during 12 to 20 five-minute observations in the home over two to four weeks during the baseline investigation (for details of the observation procedures see Patterson, Ray, Shaw, & Cobb, 1969). Home observation data through the termination of treatment are also presently available for 25 of the 27 families (14 stealers, 11 non-stealers).

B. Control families (N = 27): These families were matched with the 27 completed treatment families on relevant demographic variables. The boys in these families, however, were not seen by the parents as having adjustment problems. By offering a monetary incentive, it was possible to collect baseline observation data on each of these families in the same manner as was done for treated families.

Relevant demographic information on the total subject sample is presented in Table 1. As can be seen from inspection of these data, the groups are quite comparable.

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Insert Table 1 about here

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1. Differences among Stealing, Non-stealing, and Normal Boys[3]

A. Response to intervention (stealers vs. non-stealers): Of the 27 cases accepted for treatment, complete observation data (from baseline through termination of treatment) are presently available for 25 cases. Data from these cases are presented in this section. The most obvious difference between stealers and non-stealers in the sample treated at Oregon Research Institute was in their response to the intervention procedures. The observational measures of treatment outcome are reported in detail elsewhere (Patterson & Reid, 1972; Patterson, et al., 1972) and consisted of a comparison of an average of seven days of baseline data with the same type of observation data collected at termination of treatment.

Using a success criterion of a 33% reduction in the rate of deviant behavior (see Patterson et al., 1972) from baseline, six of the 14 stealers, compared to nine of the 11 non-stealers were categorized as successes. In other words, the procedures were approximately twice as effective for non-stealers compared to the stealers in this sample.

Comparing the reduction in rate of deviant behaviors per minute observed from baseline to termination for the two groups, the following was found: non-stealers showed a $\bar{x}$ reduction of .461 deviant behaviors per minute, while stealers showed a $\bar{x}$ reduction of .171. The difference between these rates was highly reliable ($t = 3.45$, $df = 22$, $p < .001$). Combining both groups, a rather strong and significant positive relationship was found between rate of total deviant behavior during baseline and the magnitude of reduction of deviant behavior at termination of treatment ($r = +.642$, $df = 23$, $p < .001$).

These findings point up two things: (1) children referred for treatment of social aggression who also steal are helped significantly less than the non-stealers; (2) the higher the rate of deviant behavior demonstrated by a child, the more likely he will respond to the social-learning based treatment offered at Oregon Research Institute.

B. General social behavior of stealers, non-stealers, and normals: In an attempt to better understand the differences between stealers, non-stealers, and normals, the baseline data for the entire sample (14 stealers, 13 non-stealers, and 27 normals) were more completely analyzed and compared.

As mentioned previously, from 12 to 20 five-minute observations were made of each member of all 54 families during the baseline period. The observation code used (Patterson et al., 1972) provided a running narrative account of the behavior of a given subject in terms of 29 categories and all of the reactions of other family members to him in terms of the same categories. Correlational analyses showed that only a subset of these 29 codes were sufficiently stable or reliable to warrant further analysis. This subset, along with the Spearman-Brown corrected estimates of split-half reliability for fathers, mothers, and referred children is presented in Table 2.

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Insert Table 2 about here

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The codes presented in Table 2 were then combined into two rational categories: positive-friendly and negative-coercive behaviors. From this data pool, it was possible to calculate the $\bar{x}$ rate per minute at which these two larger classes of behaviors occurred for each relevant member of each family.

Data on the occurrence of positive-friendly and negative-coercive behaviors for the three groups of boys are presented in Table 3. The normal boys, as would be expected, produced the lowest rates of negative behaviors; non-stealers produced the highest rates; and the stealers fell about midway between. Looking at the positive behaviors, the normals produced the highest rates, as expected, but the stealers fell below non-stealers on this dimension. This might suggest that even though stealers appear to be in less conflict with their families in terms of observable negative-coercive behavior, they are in greater conflict with their families if rate of positive social interaction is used as the index.[4]

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Insert Table 3 about here

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2. General Social Behavior of Parents of Normals, Stealers, and Non-stealers

Data on the occurrence of positive-friendly and negative-coercive behaviors for the parents in the three groups are presented in Table 4.

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Insert Table 4 about here

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In line with the boys' behaviors, mothers of normal boys produced the lowest rates of negative-coercive behaviors, mothers of non-stealers produced the highest, and mothers of stealers fell in between. In terms of positive-friendly behaviors, the mothers again parallel their sons: mothers of normals highest, mothers of stealers lowest, and mothers of non-stealers in between. Thus, looking at mothers' behavior we again find the possibility

of a curious paradox: If overt negative behavior is the criterion, families of non-stealers look most disturbed; if level of positive social interaction is the measure, families of stealers look the worst.[5]

Analysis of father data did not yield significant between-group effects; however, inspection of Table 4 suggests (a) that fathers in all groups interact less with their families than do mothers, (b) that fathers of non-stealers demonstrate lower rates of positive behaviors and higher rates of negative-coercive behaviors than fathers in the other two groups, and (c) that fathers of stealers behave like fathers of normals on both dimensions.

3. Analyses of Observation Data: Summary and Tentative Conclusions

The observation data indicate that predelinquent boys who steal did not respond as well to the social-learning based treatment provided at Oregon Research Institute as did those who did not steal. The analyses of general social behaviors in the families studied provide some clues as to why this is the case.

A. Stealers do not exhibit high rates of observable out-of-control behaviors: The finding that stealers tended to exhibit less deviant behavior than did non-stealers is a factor that alone might account for the relative inefficiency of a program designed to modify high rate deviant behavior. However, at least two other possibilities exist: First, the stealers may be exhibiting high rates of anti-social behavior, but only outside the home setting; second, stealers may be sneaky and shut down all deviant behavior while the observers or behavior modifiers are present. Although the second alternative is entirely possible and would argue against our general model of treatment for this type of client in outpatient settings, it fits neither our clinical impressions nor parent report, nor can its validity be checked with our current data collection technology. The first

alternative (i.e., that stealers cause trouble primarily outside the home) does fit our clinical impressions, parent report, and the perceptions of neighbors and community agencies. It is a hypothesis which helps to resolve the apparent discrepancy between referral information (i.e., high rates of deviant behavior) and our observation data (i.e., low rates of such behavior). If true, it suggests that the reason the parent training program produces minimal results is that there is little deviant behavior occurring within the actual home setting upon which the parent of the stealer can work. Finally, if it is true that the referred stealer causes little trouble at home, it is possible that the community is more immediately punished by his behavior than are the parents. Thus, the parents may refer the child for treatment primarily to appease the school counselor or to get the juvenile authorities off their backs. Were this the case, it would follow that the parents may be motivated to refer the child but relatively unmotivated to actually work to change him. This is in contradistinction to the parents of non-stealing children who are punished daily and at a high rate by their children's behavior. The idea that parents of stealers are relatively unmotivated to change or control their children has gained some measure of support in our subsequent work with stealers and will be discussed further in the final section of this report.

B. Families of stealers demonstrate low rates of positive-friendly behaviors: Although fathers' data, which have low stability (see Table 2), did not discriminate among the three groups, there was a clear pattern for the mothers and children in the stealer group to exhibit fewer positive social behaviors than those in the other two groups. These findings suggest that stealers and their families are rather distant, having only loose social ties with one another. One possible implication is that the parents of stealers may not have powerful social reinforcers at their command to be.

systematically and effectively employed within the social-learning treatment paradigm. This low rate of positive (and negative) social exchange gives the picture of a rather boring family climate, which may in fact serve to motivate the child to seek out his developmental experiences and positive reinforcers in unsupervised, extra-family settings.

4. Current Experience with Treatment of Stealers

Since the completion of work with the families discussed in the previous sections, we have switched our focus to the exclusive study and treatment of families of children who steal. Twenty-seven referrals have been made to our project since the transition. Only five of these referrals actually began treatment.[6] The primary reason for the dismal response to our offers of treatment has been lack of parental motivation to make the commitments necessary for involvement in the project. The typical pattern was as follows: The parents phone to request treatment immediately following the child's being apprehended for stealing; they either miss the intake appointment or cancel it with one of the following explanations--the problem has ceased to exist, one of the parents (usually said to be the father) refuses to cooperate, the parents have reconsidered the incident and now feel that the child was unjustly accused. The message behind these cancellations appears quite clear: The parents were upset at the time the child was apprehended, but after that incident has blown over there is little motivation to enter treatment. There is also a marked level of family disorganization characterizing these cases. The children in the families are typically unsupervised for long periods each day and the working schedules of the parents (both mother and father) tend to keep most of them from spending much time with their children.

The five families actually entering treatment have been quite difficult to treat. They tend to be very slow in completing their assignments and miss or cancel appointments at a high rate. Problems of this magnitude were not encountered in our previous work on social aggression. In fact, it has taken a rather extensive modification of our treatment strategies to effect a change in these new families.

Strategies developed in work with three of the five cases actually being treated in this series appear to offer some promise. G. R. Patterson began working with one of the cases and found that he was able to obtain only token cooperation from the parents. After several weeks of frustration, he instituted a parenting salary of $60 per month, contingent upon parental cooperation in treatment. This intervention effected a dramatic change in the progress of treatment. The parents are now collecting data, running programs and producing change in the child's behavior. It may well be the case, as previously suggested, that the parents have little motivation to work on the problem, but by giving them an extrinsic set of reinforcers, they may be treated as effectively as the families of non-stealing aggressive children.

The senior author began work with a different family and encountered problems similar to those confronted by Patterson. That is, the parents seemed unable to monitor the child's behavior, execute programs effectively or generally get involved in treatment. A different sort of strategy was implemented in this case. Each time the child was caught stealing, he was immediately taken to the local detention facility for a period of three to 24 hours by the therapist. The child was not permitted to participate in the normal institutional activities during these "time-outs" but was put to work cleaning windows or washing walls. At the end of the isolation period, the father had to leave work or his home to retrieve his son. This was

quite aversive to the father who wanted the son institutionalized. However, the child ceased getting apprehended for stealing after the fourth time-out and father began to monitor the child's behavior and to manage the prescribed programs in a verbalized effort to keep the therapist from bugging him. Although the stealing was modified, and the observation data showed that the child had halved his rate of deviant behavior, the parents terminated treatment and relinquished custody of their son to the juvenile authorities. Again, it appears that external contingencies may be necessary in the teaching of these parents to take control of their sons.

J. A. Cobb, working with another case, initially met with this lack of motivation and inability of parents to exert control over the suggested programs. After numerous discussions with the parents, he discovered that they were simply unprepared to deal with the more deviant behaviors emitted by their son. He switched gears and had the parents work on the shaping of pro-social behaviors. Effectively, he was shaping the parents to take control of their children, starting on very simple, non-threatening behaviors, then working up to dealing with aggression and stealing. At this point, the parents have achieved a good measure of control over their son. (The son, incidently, has apparently stopped stealing.) Rather than employing external contingencies, Cobb achieved success by beginning at a much more primitive level of parent-skill training than has heretofore been necessary with families treated at Oregon Research Institute.

Thus, one of the approaches we feel may be necessary is to teach the members of these families to relate more closely and positively with each other before instituting programs to eliminate undesirable behaviors. Clinically, we have seen an incredible level of family disorganization and diffusion, a near-total absence of enjoyable family activities, and a lack of general parenting skills in these families. These clinical impressions are

consistent with the findings of low levels of positive or negative interactions for the families of stealers reported in the previous sections of this report.

It is felt that a successful treatment of stealers will have to involve at least the following steps: An initial external incentive for the family to change, extensive training in intra-family relations of a general nature, training the parents to monitor or track their children, and finally programs to alter the stealing itself. At this point we are still "experimenting" with variations on the home intervention approach. Until a way can be found to get more of the referred families to actually enter and participate in treatment, the conclusions reached in this paper must remain speculative.

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Footnotes

1. This study was supported by Grants MH 10822 and R01 MH 15985. The authors wish to thank J. A. Cobb, R. R. Jones, and G. R. Patterson for their critical readings of earlier drafts of this paper.

2. Information on stealing was provided by parents during the intake procedure.

3. Henceforth, the term stealer refers to boys in treatment for social aggression who also steal; non-stealer refers to boys in treatment for social aggression who do not steal; normal refers to boys in the control group.

4. For negative-coercive behaviors, non-stealers are significantly higher than normals ($t = 2.524$, $df = 38$, $p < .025$); the difference between stealers and normals is not significant ($t = 1.438$, $df = 39$, $p > .10$), nor is the different between stealers and non-stealers ($t < 1.0$). For positive-friendly behaviors, stealers are significantly lower than normals ($t = 2.412$, $df = 39$, $p < .025$); the difference between non-stealers and normals is not significant ($t < 1.0$). The differences between stealers and non-stealers on these two dimensions are not significant. (Means are presented in Table 3.)

5. For negative-cerocive behaviors, mothers of non-stealers are significantly higher than mothers of normals ($t = 3.367$, $df = 38$, $p < .01$) and higher than mothers of stealers ($t = 2.632$, $df = 25$, $p < .025$); the difference between mothers of stealers and mothers of normals is not significant ($t < 1.0$). For positive-friendly behaviors, mothers of stealers are significantly lower than mothers of normals ($t = 3.062$, $df = 39$, $p < .01$); neither the difference between mothers of non-stealers and normals ($t = 1.228$, $df = 38$) nor between mothers of stealers and mothers of non-stealers ($t = 1.521$, $df = 25$, $p > .10$) is significant. (Means are presented in Table 4.)

6. It is important to note that this sample of stealers differs from that described in the previous sections in that the members of the present sample were referred specifically for the modification of stealing behaviors. The stealing of the former sample was considered secondary to social aggression problems.

Table 1

Demographic Information on Stealers, Non-stealers, and Normals in Present Sample

Variable	Normals (N = 27)	Stealers (N = 14)	Non-stealers (N = 13)
Age of referred child	Mdn = 8 Rng 5-11	Mdn = 8 Rng 5-14	Mdn = 8 Rng 6-11
Number of siblings	Mdn = 3 Rng 2-6	Mdn = 3 Rng 2-6	Mdn = 3 Rng 2-6
Number families with father absent	9	5	4
Socio-economic level*	Mdn = 4 Rng 1-7	Mdn = 4 Rng 2-7	Mdn = 4 Rng 1-6
Birth order of referred child	Mdn = 2nd Rng 1st-6th	Mdn = 2nd Rng 1st-7th	Mdn = 2nd Rng 1st-6th
Grades ahead or behind in school for age**	Mdn = 0 Rng -1 to +1 year	Mdn = 0 Rng -1 to +1 year	Mdn = 0 Rng -1 to +1 year

* Based upon system provided by Hollingshead and Redlich (1958) with class 1 denoting higher executive or professional, class 4 clerical and class 7 unskilled laborer.

** No fine-grain data are available on the achievement or intellectual abilities of these children.

Table 2

Behavior Categories Used in the Analysis of General Social Behavior

	Reliability (Spearman-Brown Estimate)*		
	Referred Boys	Mothers	Fathers
Positive-friendly behaviors			
Attention to other family members (AT)	.53	.55	.60
Compliance to requests from other family members (CO)	.80	.54	.55
Friendly laughing (LA)	.37	.63	.52
Playing with others or alone (PL)	.67	.74	.64
Talking to other family members (TA)	.41	.70	.55
Useful household work (WK)	.75	.67	.29
Negative-coercive behaviors			
Commands to other family members (CM)	.38	.84	.61
Angry commands to other family members (CN)	.81	.89	.70
Cry (CR)	.95	**	**
Disapproval of others (DI)	.79	.77	.65
Destruction of property (DS)	.63	**	**
Humiliation of other family members (HU)	.85	.70	.50
Ignoring initiation of others (IG)	.43	.77	-.10
Non-compliance to requests (NC)	.77	.51	.62
Subtle negativistic behaviors (NE)	.71	.81	.57
Physical assaults on others (PN)	.55	.77	.77
Teasing (TE)	.52	.92	.60
Whine (WH)	.77	**	**
Yelling at others (YE)	.85	.62	.05

* All reliabilities are based on a correlation of the first half and the second half of baseline.

**Absence of entry indicates that this behavior was never observed to occur in the group.

Table 3

Mean Rate/Minute of Positive-Friendly and Negative-Coercive Behaviors of Boys in the Present Sample

	Normals	Stealers	Non-Stealers	F	p
Positive Social Behaviors	7.18	6.29	6.84	2.46	.10
Negative-Coercive Behaviors	.30	.57	.75	4.31	.05

Table 4

Mean Rate/Minute of Positive-Friendly and Negative-Coercive Behaviors of Parents in the Present Sample

	Normals	Stealers	Non-Stealers	F	p
Positive-Friendly Social Behaviors					
1. Mothers	8.66	7.31	8.19	4.35	.05
2. Fathers	6.67	6.79	5.82	1.55	n.s.
Negative-Coercive Behaviors					
1. Mothers	.63	.77	1.07	4.55	.05
2. Fathers	.43	.43	.62	1.44	n.s.