

*THE INSULAR MOTHER:  
HER PROBLEMS IN PARENT-CHILD TREATMENT*

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Eighteen mother-child dyads were referred for psychological help because of the children's oppositional behaviors and the mothers' aversive reactions to the children. All dyads were from low income families in which the mothers reported themselves to be relatively isolated from social contact in their communities. Following a baseline phase, the mothers were trained to modify their children's oppositional behaviors through time out and a point system. Fourteen of the dyads were observed in three phases of the study: baseline, parent training or treatment, and a 1-year follow-up period. In Phases one and two, child opposition and mother aversive reactions to the children were measured twice weekly by professional observers in the home settings. During Phase three (follow-up), these observations occurred twice per month. In addition, the mothers' self-reported contacts with people in their communities were obtained immediately after each observation. Results showed significant improvement in the mother-child problems during the parent training or treatment phase. However, the problems returned to baseline levels of occurrence during the follow-up phase. The self-report findings indicated that number of mother contacts with friends was an inverse predictor of these problems. On days marked by high proportions of friend contacts, mother-child problems were lower in frequency than on days marked by low proportions of friend contacts. These correlational findings were taken to suggest that a mother's extra-family social contacts may influence her child interaction patterns at home. This possibility was discussed as a factor in the long-term success of parent training as a treatment strategy.

DESCRIPTORS: child-mother behavior problems, coercive contacts, friendship, correlational analyses, indirect influences

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Child behavior problems in family settings improve following parent training in social learning techniques (Forehand & Atkeson, 1977). More important, there are also recent data indicating that these improvements may be maintained *after* such parent training. In Patterson and Fleishman (1979), 33 problem families were observed in a 12-month follow-up phase after successful parent training. At the 12-month time frame the children's behavior problems were sampled through direct observation and parent self-report. Both home-based

measures showed that more than 80% of the children had maintained their treatment produced reductions in problem behavior. Likewise, Forehand, Sturgis, Aguar, Beggs, Green, McMahon, and Wells (1979) monitored a sample of 11 successfully trained parent-child dyads into a 6-month and 12-month follow-up probe. At both probes home observations were taken as well as parent self-report. Consistent with Patterson and Fleishman (1979), the professional observers and the parents reported statistically stable maintenance in Follow-up. Wahler (1975) added still further maintenance evidence in a 24 month home follow-up for two troubled parent-child dyads. Direct observations clearly confirmed that the parent training success was maintained for both children.

Unfortunately, as Keeley, Shemberg, and Car-

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This study was supported by research grant MH 18516 from the National Institute of Mental Health, Crime and Delinquency Section. Reprints may be obtained from the author, Child Behavior Institute, Department of Psychology, University of Tennessee, 1720 Lake Avenue, Knoxville, Tennessee 37916.

bonell (1976) point out, the maintenance question has rarely been addressed in parent training studies. In addition, there are several studies in which parent training had *no* effects. Johnson and Christensen (1975) monitored a sample of 14 parent-child dyads into an 8-month follow-up. Parent training was not followed by reductions in the children's problem behaviors. Of course, a similar picture emerged at the 8-month follow-up. The children's problem behavior rates in this phase were virtually identical to their rates during baseline. Likewise, Ferber, Keeley, and Shembert (1974) found a similar lack of success in their family sample. It seems reasonable to conclude that not all families will profit equally from parent training.

Suggestions on factors related to these discrepant findings have also been offered. Reisinger, Frangia, and Hoffman (1976) argued that their failure cases may have been influenced by parent-parent problems within the family. In a similar line of inquiry, Strain, Young, and Horowitz (in press) found that the mothers of intact families progressed faster in parent training than was true of single parent families. Both investigators partly viewed the training success-failure issue as a function of social problems more numerous than those encompassed in the parent-child dyad.

One rather simplistic predictor of multiple problems in a family is poverty (Giovannoni, 1971; Giovannoni & Billingsley, 1970). These researchers also found that poverty level parents were seldom in contact with their own community support services—those designed to alleviate family distress (e.g. medical, educational, and mental health agencies). In reference to parent-child problems, such as abuse and neglect, the isolate status of these parents was even more evident (Garbarino, 1977; Parke & Collmer, 1975). One might speculate that poverty level families with child rearing problems do not have the sorts of community contacts likely to promote and sustain therapeutic change. In following this line of reasoning, Wahler, Leske, and Rogers (1979) studied the community social

contacts reported by parents who did not profit from parent training versus parents who did show therapeutic gains with their troubled children. As expected, the failure cases were represented by poverty level, poorly educated parents. When the authors then interviewed mothers in the treatment failure and success cases, the two sets of mothers reported different views on interpersonal problems connected with child rearing. Both groups reported similar problems with their children and other members of their families. However, the failure cases also reported a good many interpersonal problems outside their families. These mothers felt "cut off" from social contact—and those contacts they did experience were viewed as unsolicited and sometimes negative in valence. In an effort to quantify this interview picture, Wahler, Leske, and Rogers (1979) constructed a self report checklist aimed at day to day recording of such extra-family contacts. Frequency data from this "Community Interaction Checklist" verified these interview impressions: The mothers from very low income families consistently reported quite different community interactions than did mothers from middle income families. The latter reported much higher frequencies of social contact, rated these contacts as more rewarding, and usually identified the other parties as "friends." The isolate mothers, on the other hand, identified their limited and sometimes aversive contacts as "kin-folk" and "helping agency representatives."

A social learning theory formulation of the parent isolation factor was recently argued by Wahler (in press). Following the findings of Wahler, Leske, and Rogers (1979), it seemed reasonable to interpret this factor within a coercion hypothesis similar to that offered by Patterson and Reid (1970) for parent-child problems. Such an interpretation rests not on isolation per se, but rather on the aversive nature of those social contacts that do occur. Presumably, these contacts contribute indirectly to the maintenance of mother-child problems through a hypothetical process called *insularity* (Wahler, in press). We turn now to an outline of this process.

Table 1

Summary reports of mothers' aversive and positive interactions with adults in their communities. The valences of these reports and the identities of the other parties were taken from the Community Interaction Checklist. Summary reports of these interactions were based on interviews with the mothers.

	<i>Other Party Involved in Report</i>
<i>A. Mother's Summary Report of Aversive Ratings</i>	
1. She's all the time telling me what to do.	Maternal Grandmother
2. It's like he thinks he's God Almighty. I don't do nothing right according to him.	Father's Brother Welfare Worker
3. I tell you. She's not only a snoop, she expects me to be perfect.	Human Service Worker
4. I know I'm supposed to do what she says—but she really don't know nothing about kids.	Paternal Grandfather Maternal Grandmother
5. That old man can't handle his own kids. He's drunk all the time. And he says I'm no good!	Psychologist
6. She's really got a way of making me feel like a kid again.	Mother's Aunt Maternal Grandmother Welfare Worker
7. We didn't want him in here. We know what's wrong. He don't need to keep reminding me.	
8. All right. So when I see her coming, I just figure, I guess I'll have to do it her way.	
9. It's pick at this and pick at that. I just wish she'd stay away.	
10. Well, you've got to do what they say.	
<i>B. Mother's Summary Report of Positive Ratings</i>	
1. I don't know why, but when she comes around I can just relax.	Friend
2. You know—we just sit on the porch and talk about nothing.	Friend
3. You'd be amazed how nice it is to have somebody just listen.	Friend
4. A lot of the time we don't even talk. I just like to have her around.	Sister in Law
5. You know, it's funny. When she comes over I like to have the house clean—but she's never critical.	Friend
6. Sometimes she tells me her troubles. I go to her place a lot.	Friend
7. When she's over, she's not come to borrow nothing. She likes me. I know that.	Friend
8. Jimmy's usually good when he comes over. And he don't ever tell us what to do.	Father's Friend
9. Sometimes we play cards or gossip. But, gee, I don't know what all.	Friend
10. We're going to get into the babysitting business. We've talked about it a lot.	Friend

Table 1 provides a description of aversive and positive interchanges as reported by mothers sampled in Wahler, Leske, and Rogers (1979). The aversive interchanges appear to be coercive in much the same manner as those characterizing mother-child problems (Patterson & Reid, 1970): The other party approaches through manding actions that direct the mother to start or stop certain behaviors. If the mothers typically comply with these mands, a coercion trap is completed since both parties are then reinforced. The other party (usually kinfolk or professional helper) is positively reinforced through

mother compliance, and the mother is negatively reinforced through mand termination. The mother will thus comply predictably with mands aimed at changing her pattern of child interactions—as long as the mands are presented to her. Once the outside party stops manding, there is little reinforcement to sustain her compliance. The noninsular mother, on the other hand, is not coerced into shifting her child interaction pattern. Therefore, it would seem that her "compliance" with a therapeutic program would not involve the short-lived coercion operations. Her treatment maintenance might well

be supported through the same positive reinforcement contingencies that characterize her day-to-day life before and after a therapeutic program.<sup>1</sup>

At least two questions are posed by the above correlational data and speculations: (1) Do insular mothers in fact "comply" with treatment instructions but then show an absence of treatment effects in follow-up? (2) Granted that answers to the first question are "yes," can one document empirically a relationship between the mothers' extra-family social contacts and problem interactions with their children? The present study was designed to yield findings on both questions.

## METHOD

### *Subjects*

Subjects were 18 mother-child pairs representing families seeking psychological help for child behavior problems. Each of the 18 families fit socioeconomic criteria that Wahler, Leske, and Rogers (1979) found associated with parent insularity. That is, all were subsisting on low incomes (below \$5,000 per year), parent educational attainment was low (less than high school graduation), and all lived in areas of the city (Knoxville, Tennessee) known for high crime rates. In 12 of the families, both parents were present and in the other 6, the mother was the sole parent.

In all cases, efforts to seek psychological help were initiated by the mother, but this help-seeking process was started and directed by a source outside the family (Department of Human Services, public schools, or juvenile court). All helping efforts were focused on one child in these families. That child was male and his mean age was about 8 years (range 4 to 10 years of age).

<sup>1</sup>Mother compliance with a treatment program should be reinforced through her child's improved behavior. This source of positive reinforcement is a given for all parent-child treatment strategies. The question posed above concerns the relative importance of reinforcement contingencies from other sources within and outside the mother's family.

The referral problems can best be described in two sets, one involving interactions with a parent and the other usually occurring outside the scope of parent attention. Interaction problems included the following child behaviors: non-compliance, whining, verbal abuse, screaming and crying, teasing, hitting, and throwing objects. The second problem set included: fighting, stealing, property destruction, and wandering away from home. On the parent side of the interaction set of problems, mother behaviors included: yelling, screaming, and striking the child. All parents in this sample expressed strong desires to reduce both sets of child referral behaviors.

### *Measurement Techniques*

An initial interview with each mother (and father when possible) permitted a specification of measurement periods for the mother-child interaction problems. These periods were designated by the mothers as times of the day at home when interaction problems were most likely to occur. When a time was picked, a 30-min segment of that time was then established as a regular measurement time. Twice weekly, a professional observer was present during these segments. The observer initiated these sessions by first ensuring that the following conditions were in effect: all family members inside the house; nonfamily members not present; television sets turned off. When these conditions were met, the observer activated a tape player that announced to the observer by earphone 10-sec observe intervals and 5-sec record intervals. For the next 30 min the observer used Standardized Observation Codes (SOC) to code the target child's behavior and that of other family members who interacted with that child. The SOC system described in Wahler, House, and Stambaugh (1976) permits a comprehensive (24-code) picture of child behavior and stimulus input for that behavior as provided by adults and peers.

Table 2 describes briefly those codes relevant to the purpose of this study. *Child Opposition*

Table 2

At left are three summary categories reported later in Results. These are based on total percentage occurrences of six categories (at right) of a 24-category coding system by Wahler, House, and Stambaugh (1976). Observer scoring of the above categories would require the more detailed definitions in the Wahler et al. system.

Child Opposition	<p><i>Opposition (O)</i>. Scored for a full interval of noncompliance with parent instructions or any instance of a parental rule violation.</p> <p><i>Aversive Opposition (O-)</i>. Scored as the above category, but also accompanied by assertive verbal or nonverbal action.</p> <p><i>Complaint (CP)</i>. Scored for any instance of verbal or nonverbal protest.</p>
Mother Aversive Behavior	<p><i>Aversive Social Attention (SA-)</i>. Scored for any instance of adult behavior directed to the target child. In addition, that adult behavior must be classified as assertive.</p> <p><i>Aversive Instructions (IA-)</i>. Scored for any instance of adult instructions directed to the target child. In addition, that instruction must be classified as assertive.</p>
Social Interaction	<p><i>Social Interaction Adult (SIA)</i>. Scored for any instance of adult interaction with the target child.</p>

summarizes all possible child problem behaviors mentioned by the mothers as "interaction problems." *Mother Aversive Behavior* summarizes all possible maternal behaviors noted by the mothers as defining their roles in the interaction problems. Thus, the two summary categories appear to provide a reasonable account of those child-mother exchanges defining the referral for psychological help. *Social Interaction* summarizes all mother-child interactions occurring during an observation session. This category was used to reflect an overall index of nonaversive interchanges throughout the study.

Whenever an observer completed one of the 30-min observations, that person was then required to obtain parent self-report data on an insularity measure. This measure, called the Community Interaction Checklist (Wahler, Leske, and Rogers, 1979), is a means of prompting parent recall of extra-family social interactions over the past 24 hours. In separate interviews, each parent is asked to recall these social contacts within the framework of multiple categories: identity of the contact person (friend, kinfolk, helping agency representative); who initiated the contact (self or other); valence of the contact for parent (7 = bad to 1 = good); and, there are a number of other categories not

relevant to this study. Finally, the parent is asked to estimate the total number of hours (excluding sleep) during which the parent had direct caretaking responsibilities for the target child. This latter estimate is a rough means of determining whether or not various outside family contacts affect the day-to-day time between parent and child.

It is important to note that these Community Interaction Checklist data correspond moderately well (within 24 hours) with the parent-child observational data based on the Standardized Observational Codes. Thus, over a series of observation sessions, time-matched score distributions are produced for both sets of measures. One could, therefore, conduct a correlational analysis reflecting time relationships between a parent's child contacts and those with people outside the family. This was, of course, one purpose of the present study.

#### *Measurement Reliability*

The two measurement systems differ sharply in their psychometric properties. Although the Standardized Observation Codes (SOC) can be subjected to the usual tests of observer reliability, the Community Interaction Checklist (CIC) cannot. It was assumed that if self-reported par-

ent contacts are at all consistent and related to that parent's interfamily behavior, these measures ought to covary with the objectively sound Standardized Observation Codes. If parent self-reports are inaccurate, no such covariations should materialize.

All measures were taken by undergraduate observers who were trained and supervised by staff members of the Child Behavior Institute. Training entailed an intensive 2-week reading, lecture, and videotape experience with reliability checks on the Standardized Observation Codes (SOC). Observers were assigned to field observations with families only when they obtained overall agreement of 80% with the precoded SOC videotapes. Following assignment, observers met once weekly for recall checks on code definitions encompassing all measurement systems. On a biweekly, unannounced schedule, each observer was visited in his or her family setting for a reliability check by one of four "master" observers.

Reliability analyses of SOC data entailed a comparison of session totals of each code for the standard observer and the master observer. Agreement percentages, thus, did not entail a moment-by-moment comparison of code scores. Since all code analyses for the study were for session scores, more fine-grained reliability inspection was not necessary.

Each of the 18 mother-child dyads was observed simultaneously by two observers on an average of 19 times over the three phases of this study ( $\bar{X}$  of 4 in baseline, 8 in treatment, and 7 in follow-up). Table 3 presents a summary of the interobserver agreement obtained in these reliability checks on the Standardized Observation Code (SOC) observers. One should note that these agreement percentages were based on session totals for the two category groupings, not on within session interval-by-interval comparisons. Thus, the agreement means listed in this table reflect the reliabilities of *total session scores* derived from the SOC system. Because total session scores are the only data to be reported here, such a means of computing reliability

Table 3

Observer mean agreement percentages with range in parentheses. All agreement percentages were based on total session scores in which time intervals were ignored. Opposition agreement was based on the sum of three categories (O, O-, and Cp). Mother aversive behavior is based on the sum of two categories (Sa-, Ia-). Social interaction is based on one category (SIA). See Table 2 for all category definitions.

	<i>Baseline</i>	<i>Treatment</i>	<i>Follow-up</i>
Child	.83	.79	.84
Opposition	(.77-.92)	(.76-.91)	(.80-.89)
Mother	.81	.80	.86
Aversive	(.78-.91)	(.76-.93)	(.82-.89)
Social	.90	.92	.89
Interaction	(.81-.96)	(.80-.98)	(.88-.91)

seems reasonable. An inspection of Table 3 shows that observers were typically able to keep their scoring performance up to the 80% agreement level expected of them during training.

#### *Family Treatment*

Baseline phases for most families encompassed time periods of 4 to 6 weeks. At the completion of this phase, each parent or parents began an intensive educational experience under the supervision of a staff member (advanced graduate student) who had been assigned responsibility for that family during baseline. There were several parts to this intervention:

1. Baseline data from SOC were presented and discussed between parents and staff. The focus here was primarily on SOC findings reflecting adverse child-parent interactions and deficits in the target child's behaviors. Concerning the former, the child's oppositional actions (non-compliance, rule violations, and complaints) were important items. Equally important were the parents' interchanges with the child during such episodes. Parent use of instructions was noted, particularly in reference to parent follow through efforts as seen in baseline records of parent positive and aversive attention directed to the child. The substance of this discussion was aimed at making a parent aware of how the child's oppositional behavior was related to (and

probably maintained by) parental ways of responding to the child.

Child baseline deficits as revealed by SOC always centered on work, cooperative parent-child interactions, or independent play. Discussion on these topics functioned to show parents how these deficits could be viewed as child-produced alternatives to oppositional behavior.

2. The baseline findings were then set within a social learning explanation along the lines of Patterson's (1974) *coercion hypothesis*. This bit of lecture by the staff member, it is hoped, made the maintenance arguments from baseline more understandable to the parents. As the logical conclusion of this explanation, the staff member emphasized the necessity of helping parent and child escape their "coercion trap."

3. Specific means of escaping the coercion trap were next outlined for the parents. These included a point reward system for increments in the child's behavior deficits and one of two means of not "giving in" to the child's oppositional actions. Depending on the parents' admitted tolerance level for these actions, ignoring or a time out contingency were specified. In all 18 families, time out was the chosen contingency. At this point, the target child was brought into the discussion for a summary of previous discussions and a setting of contractual arrangements on the reward system as well as the chosen means of handling oppositional actions. In all families, the deficit-improving part of the contract was to be carried out at least once per day.

4. The parent or parents were then instructed by the staff member to explain to the child and to carry out an example of the point reward system. If necessary, the staff member modeled appropriate parent behaviors and observed parent implementation of the procedure. If child oppositional actions occurred during this demonstration, the staff member prompted (if necessary) the parents' use of time out.

It should be stressed that the staff member and the family were well acquainted prior to treatment. Staff member responsibility included

once-per-week visits to the family during baseline for discussions of how the observations were progressing and listening to parent descriptions of child and family problems. The staff member was also free to play with the target child and siblings, as well as to interact with other members of the family. Following treatment implementation, these once-per-week visits continued, with a focus now on treatment follow through. SOC observations never occurred during the staff member's visits, nor did they occur during parts of the day devoted to the target child's deficit-improving contract.

5. Once the staff member was satisfied with parent understanding and use of the treatment procedures, these consultation visits shifted to an every 2-weeks schedule. In addition, the function of these visits changed from prompting and instructing the parents to a more reactive purpose. Serving such a purpose meant that the staff member was simply available to offer advice if the parents asked for it.

SOC observations were also conducted on a thinner schedule. For the first month of this follow-up phase, observations occurred once per week. Thereafter, the schedule changed to every 2 weeks and continued from 8 months to 1 year across the family sample.

## RESULTS

### *Mother Community Interactions*

We turn now to a three-phase profile of the mothers' self-report data based on the Community Interaction Checklist (CIC). These profiles are reported primarily to justify a description of the 18 mothers as "insular" according to the definition used by Wahler, Leske, and Rogers (1979). These authors found that their noninsular mothers reported an average of 9.5 extra-family interactions per day, while the insular mothers averaged 2.6. The noninsular mothers' contacts were largely with friends ( $\bar{X} = 58\%$ ), and these mothers' valence ratings of the interactions ranged from positive to neutral. On the other hand, the insular mothers' contacts were

Table 4

Mother reported social contacts outside their families. These reports summarize the number of daily contacts per mother and the number of these contacts judged aversive by each mother. These data were taken from the Community Interaction Checklist.

	<i>Baseline</i>			<i>Treatment</i>			<i>Follow-up</i>		
	<i>Friend</i>	<i>Kinfolk</i>	<i>Helper</i>	<i>Friend</i>	<i>Kinfolk</i>	<i>Helper</i>	<i>Friend</i>	<i>Kinfolk</i>	<i>Helper</i>
Mean Daily Contacts	1.01	.96	.70	1.21	.89	.81	1.11	.84	1.31
Mean Number Aversive Ratings per Phase (5 to 7)	2.2	8.3	4.5	2.8	7.3	4.9	1.9	9.2	6.2

not usually with friends ( $\bar{X} = 30\%$ ) but were typically kinfolk ( $\bar{X} = 30\%$ ) or helping agency representatives ( $\bar{X} = 22\%$ ). While the noninsular mothers never rated their interactions aversive, the insular mothers rated some of their interactions as highly aversive.

Reference to Table 4 supports an overall classification of the present sample of mothers as insular. First, the average number of daily contacts are reported to be less than three. Next, the largest proportion of these contacts are with kinfolk and helpers (60%) as opposed to friends. Finally, the present sample of mothers are prone to judge some of their interactions as aversive on the CIC 7-point scale. As expected,

most of the aversive ratings are attached to kinfolk and helping agency representatives. A last look at this table will also orient the reader to the pronounced stability of these maternal reports over all three phases of the study. There is little to suggest that the mother-child treatment program altered the mothers' extra-family interaction patterns—and, of course, there is no reason to expect that it would.

#### *Family Treatment Outcomes*

Table 5 summarizes the impact of parent training on the mother-child dyads. The SOC scores are reported in this table based on 14 of the 18 dyads who completed all three phases of

Table 5

Changes in child problem behavior and mother problem behavior over a course of treatment and follow-up. Subjects are 14 mother-child pairs who completed baseline, treatment and follow-up. Child problems (opposition) are based on the sum of three categories: opposition, aversive opposition, and complaints. Mother problems (aversive behavior) are based on the sum of two categories: aversive attention and aversive instructions. Also included in the table is mother-child social interaction. This category provides an overall index of contact duration between these people. See Wahler, House, and Stambaugh (1976) for category definitions.

		<i>Baseline</i>	<i>Treatment</i>	<i>Follow-up</i>
CHILD OPPOSITION	Mean	3.95	2.00	4.07
	Standard Deviation	4.14	2.81	2.84
MOTHER AVERSIVE BEHAVIOR	Mean	2.24	.88	2.23
	Standard Deviation	3.97	1.66	2.64
SOCIAL INTERACTION	Mean	44.47	38.51	43.48
	Standard Deviation	27.80	29.37	30.39



the study. First, consider changes in the mothers' child directed aversive behaviors between baseline and treatment. *T*-tests for correlated means revealed that the mothers' pronounced reductions in yelling, screaming, etc. were highly significant,  $t(13) = 3.10$ ,  $p < .01$ . As one would then expect, the child members of these dyads also displayed marked reductions in their oppositional behaviors during treatment,  $t(13) = 3.98$ ,  $p < .01$ . It should next be noted in this table that these reductions in mother-child problem interchanges did not diminish the overall levels of interaction between these people. Table 5 pictures an apparent drop in social interaction during the treatment phase, but this baseline to treatment difference was not statistically significant,  $t(13) = 1.53$ ,  $p = .20$ . Thus, the mother-child problem exchanges were largely replaced by nonaversive exchanges during treatment.<sup>2</sup>

Unfortunately, the problem behavior reductions seen during the treatment sessions clearly did not continue into the follow-up phase. The mothers increased their child-directed aversive behaviors to a level almost identical to baseline, treatment vs. follow-up,  $t(13) = -3.83$ ,  $p < .01$ . Likewise, their children's oppositional behaviors increased dramatically from treatment to follow-up,  $t(13) = -4.52$ ,  $p < .01$ . Thus, although parent training did have short-term beneficial effects on this sample, the effects were not at all durable.

*Across Setting Relationships:  
Mothers as Mediators*

Evidently these mothers did not continue to use the child management procedures that proved successful in reducing their child interaction problems. When the treatment consultants no longer directed mother performance

(follow-up), the problem patterns seen during baseline again materialized. One will recall that such a maintenance failure was viewed earlier as a possible function of the mothers' day-to-day interchanges outside their families—in particular, those judged by the mothers as aversive. We turn now to a correlational inspection of this possibility.

If, in fact, the mothers' aversive interchanges in their communities affected their child interactions, one might examine the process by first separating the mothers' child care days into aversive and nonaversive groupings. As Table 4 showed, friend contacts were generally rated as nonaversive. Thus, one could contrast days during which most of a mother's contacts were with friends versus those comprised primarily of kinfolk and helping agency representatives. This done, one could then compare the magnitude of mother-child problems on "high friendship" days with those on "low friendship" days. Figure 1 presents such a comparison of the Table 5 SOC data: High friendship data points were taken from session days in which mothers reported friend contacts as 80% or more of their total extra-family interchanges; low friendship days were set as those composed of friend contacts at 20% or lower. Figure 1 shows that the mothers' child-directed aversive behaviors were consistently different on high and low friendship days, especially in baseline and follow-up. On those days characterized by high proportions of friend contact, the mothers were significantly less aversive in their child interactions, baseline,  $t(13) = -2.40$ ,  $p < .05$ ; follow-up,  $t(13) = -3.64$ ,  $p < .01$ . During the treatment phase, however, the friendship contact factor did not differentiate the mothers' child-directed aversive behaviors,  $t(13) = 1.79$ , N.S. Of course, since mother aversive behavior was quite low during treatment, there was simply less chance for any such differences to appear.

Figure 2 portrays the children's oppositional behaviors as a function of the same mother-reported friendship contacts. Once again, high and low mother friendship is a good predictor of

<sup>2</sup>The inference that parent training *caused* the desirable changes seen in the treatment phase is based on a relatively weak AB experimental analysis. Treatment causality seems warranted because of many previous reports in the literature on the behavior change power of parent training techniques (see Patterson and Fleischman review, 1979).

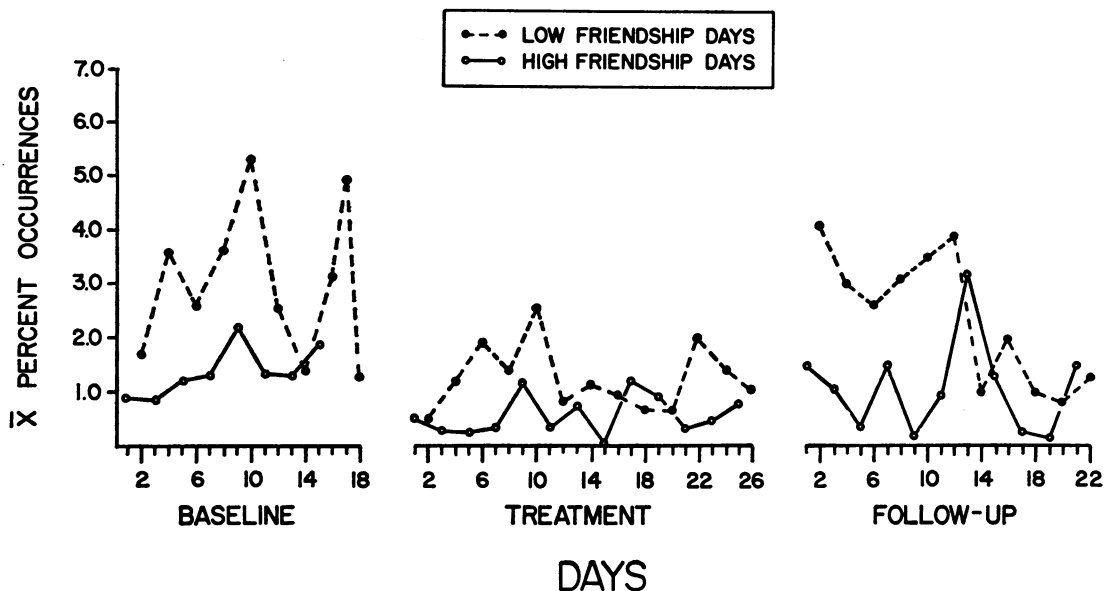


Fig. 1. Mean percentage occurrences of mother aversive behavior directed to target child. These means are presented for two sets of observation sessions over three phases of this study. Low friendship sessions are those occurring on days in which the mothers reported friend contacts to be less than 20% of their extra-family contacts. High friendship sessions refer to days comprised of 80% friend contacts.

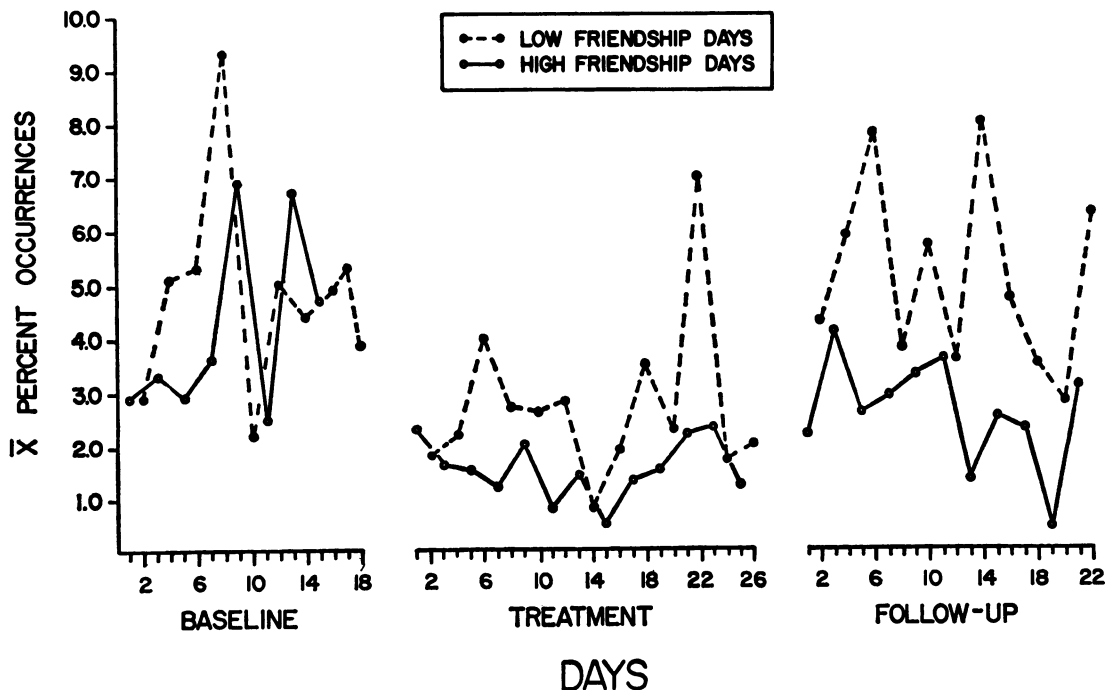


Fig. 2. Mean percentage occurrence of target child oppositional actions. These means are presented for two sets of observation sessions over three phases of this study. Low friendship sessions are those occurring on days in which the mothers reported friend contacts to be less than 20% of their extra-family contacts. High friendship sessions refer to days comprised of 80% friend contacts.

within family problems. During baseline and follow-up, the children were significantly more oppositional on their mothers' low friendship days than on days marked by high proportions of mother/friend contacts, baseline,  $t(13) = -3.03$ ,  $p < 0.1$ ; follow-up,  $t(13) = -3.64$ ,  $p < .01$ . As found earlier with respect to mother aversive behavior, the friendship factor did not differentiate levels of child opposition during the treatment phase,  $t(13) = 1.63$ , N.S. And, as noted earlier, the suppressed rates of child opposition during treatment may have masked the appearance of a friendship factor.

Table 6 provides strong support for the session differences depicted in Figures 1 and 2. Daily covariations between the number of mother friendship contacts and her coercive child interactions are consistently evident. The mothers' aversive reactions to their oppositional children are inversely correlated with friendship contacts in each phase of this study. Even during the successful treatment phase, the friendship factor could predict daily fluctuations in the mothers' yelling, screaming, and other coercive child control techniques. As expected, the children's oppositional behaviors also followed suit with their mothers' extra-family contact patterns—except for the baseline phase.

One of the most interesting features of these less predictable children has to do with their highly predictable follow-up behavior. Table 6 indicates a strong inverse correlation between their oppositional behaviors and mother friendship contacts. An inspection of Figure 2 will also show that child improvement during treatment did continue into the follow-up phase *during the mothers' high friendship days*. If one were to trace the baseline to follow-up trend in opposition, it becomes evident that this behavior does not return to baseline levels in sessions marked by high proportions of mother friendship contact, baseline vs. follow-up,  $t(13) = 2.14$ ,  $p = .06$ . However, since mother aversive behavior did not show a similar trend, this maintenance finding makes little sense in terms of mother continuation of the treatment program.

A final finding in this section must be noted to rule out an obvious explanation of the highly significant differences between SOC scores on high and low mother friendship days: Did the mothers spend less time with their children on high friendship days and thus have less time to engage in interaction problems? Clearly the answer is *no* in all phases of the study. Mother estimates of caretaking time (taken from the Community Interaction Checklist, CIC) were virtually identical for both sets of days throughout the study. The predictive power of mother extra-family contact is not a simple artifact of mother-child interaction time.

## DISCUSSION

The present findings lead to a rather straightforward conclusion, and a tentative inference. The conclusion centers on the maintenance likelihood of mother-child behavior change following a successful parent training program. The mothers who were trained in this study were able to produce significant changes in problem interactions involving themselves and their children. The fact that neither the mothers nor their children maintained these changes must lead one to question the overall, singular effectiveness of parent training as a therapeutic approach in families. In other words, a reduction in parent-child problem interactions cannot be taken as a *guarantee* that such changes will persist.

The fact that other parent training studies have shown maintenance leads to the tentative inference. The mothers in this study displayed social characteristics that might well have set them apart from previous parent training samples. That is, the present "insular" sample reported social interchanges outside their families that may not have characterized the previously studied maintenance success families. Of course, without insularity measurement of these previous samples, such a difference is unknown. In any case, the present findings suggest that certain extra-family contacts are associated with a mother's child rearing strategy. If a mother's

Table 6

Spearman rank order correlation coefficients reflecting daily covariations between the number of mother reported friendship contacts and two measures of these mothers' child rearing problems at home.

Correlated Measures	Study Phases		
	Baseline	Treatment	Follow-up
Mother Aversive Behavior +	-.80**	-.56*	-.49*
Mother Friendship Contacts Child Oppositional Behavior +	-.15 NS	-.44*	-.83**
Mother Friendship Contacts			

\* $p < .05$

\*\* $p < .01$

day-to-day social contacts are few and/or aversive, her sustained ability to change troublesome interactions with her children could be seriously hampered. This statement neatly summarizes the inference. Certainly a means of cross-checking a parent's self-reported community contacts is necessary before this conclusion is seen as anything more than tentative. For example, a mother's *recall* of aversive and nonaversive community contacts could be affected by the quality of her child interactions during a home observation. Since mother self-reports were taken immediately after each home observation, it is conceivable that aversive episodes during an observation could bias a mother's report in the direction of noting more aversive interactions prior to the session. Nevertheless, the remarkable predictive strength and consistency of mother friendship contacts certainly warrants further study.

Friendship as an inverse predictor of mother-child coercive problems gains some credibility from the previously cited sociological findings. Families in which parent-child coercion is severe enough to constitute child abuse have been characterized by the mothers' social isolation in the community (Garbarino, 1977). Wahler, Leske, and Rogers (1979) replicated this finding and also discovered that these limited contacts seldom involved the mothers' friends and were usually not initiated by the mothers. In other words, these more severely troubled mothers ap-

peared to avoid interchanges with people outside their families. The present findings, of course, suggest that this avoidance behavior is a direct function of manding approaches by these mothers' principal contact parties—extended family and helping agency representatives.

The present correlational findings lead to an interesting hypothesis for experimental analysis. An insular mother's pattern of extra-family social contacts may have *indirect* effects on her child rearing behavior. The nature of that pattern would argue that a shift from manding relationships to more friendship oriented contacts might have beneficial effects on her child rearing efforts. If, somehow, one could help these mothers to alter their community interactions in the direction of friendship relationships, that change might support more positive interchanges between the mothers and their children.

## REFERENCES

- Ferber, H., Keeley, S. M., & Shemberg, K. M. Training parents in behavior modification: Outcomes of and problems encountered in a program after Patterson's work. *Behavior Therapy*, 1974, 5, 415-419.
- Forehand, R., & Atkeson, B. Generality of treatment effects with parents as therapists: A review of assessment and implementation procedures. *Behavior Therapy*, 1977, 8, 575-593.
- Forehand, R., Sturgis, E., Aguar, D., Beggs, V., Green, K., McMahon, R., & Wells, K. Generality of treatment effects resulting from a parent training program to modify child non-compliance. *Behavior Modification*, 1979, 3, 3-25.

- Garbarino, J. The price of privacy in the social dynamics of child abuse. *Child Welfare*, 1977, **56**, 565-575.
- Giovannoni, J. M. Parental mistreatment: Perpetrators and victims. *Journal of Marriage and the Family*, 1971, November, 649-657.
- Giovannoni, J. M., & Billingsley, A. Child neglect among the poor: A study of parental adequacy in three ethnic groups. *Child Welfare*, 1970, **49**, 196-204.
- Johnson, S. M., & Christensen, A. Multiple criterion follow-up of behavior modification with families. *Journal of Abnormal Child Psychology*, 1975, **3**, 135-154.
- Keeley, S. M., Shemberg, K. M., & Carbonell, J. Operant clinical intervention: Behavior management or beyond? Where are the data? *Behavior Therapy*, 1976, **7**, 292-305.
- Parke, R., & Collmer, M. Child abuse: An interdisciplinary analysis. In M. Hetherington (Ed.), *Review of Child Development Research*. Chicago: University of Chicago Press, 1975.
- Patterson, G. R. Intervention for boys with conduct problems: Multiple settings, treatments and criteria. *Journal of Consulting and Clinical Psychology*, 1974, **42**, 471-481.
- Patterson, G. R., & Fleischman, M. J. Maintenance of treatment effects: Some considerations concerning family systems and follow-up data. *Behavior Therapy*, 1979, **10**, 168-185.
- Patterson, G. R., & Reid, J. B. Reciprocity and coercion: Two facets of social systems. In C. Neuringer and J. Michael (Eds.), *Behavior modification in clinical psychology*. New York: Appleton-Century-Crofts, 1970.
- Reisinger, J. J., Frangia, G. W., & Hoffman, E. H. Toddler management training: Generalization and marital status. *Journal of Behavior Therapy and Experimental Psychology*, 1976, **7**, 335-340.
- Strain, P. S., Young, C. C., & Horowitz, J. An examination of child and family demographic variables related to treatment outcomes during oppositional child training. *Behavior Modification*, in press.
- Wahler, R. G. Parent insularity as a determinant of generalization success in family treatment. *The ecosystem of the sick kid: Implications for classification and intervention*. CUNY Graduate Center: New York. In press.
- Wahler, R. G. Some structural aspects of deviant child behavior. *Journal of Applied Behavior Analysis*, 1975, **8**, 27-42.
- Wahler, R. G., House, A. E., & Stambaugh, E. E. *Ecological assessment of child problem behavior: A clinical package for home, school and institutional settings*. New York: Pergamon Press, 1976.
- Wahler, R. G., Leske, G., & Rogers, E. S. The insular family: A deviance support system for oppositional children. In L. A. Hamerlynck (Ed.), *Behavioral Systems for the Developmentally Disabled: I. School and Family Environments*, New York: Bruner/Mazel, Inc., 1979.

Received January 29, 1979

Final acceptance September 21, 1979