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7

# The Role of Parental Variables in the Learning of Aggression

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In a number of studies, parents' child-rearing styles have been related to the aggressive behavior that children display outside the home, especially in school, as well as to their antisocial behavior as adolescents and adults. In two large-scale longitudinal investigations, conducted in different areas of the United States and in four other countries with 6- and 8-year-old children, parental rejection of the child, punishment for aggression by the child, and lack of identification of the child with the parent were related independently both to contemporaneous behavior in school and to adult behavior. However, regression analyses seem to indicate that the parent behaviors were more likely a response to the aggression of the child than an instigation to aggression by the child. The best predictor to adult aggression and antisocial behavior was the extent of child aggression, regardless of parental behavior.

A rapidly accumulating body of data suggests that aggression, as a characteristic way of solving interpersonal problems, usually emerges early in life. Each individual seems to develop a characteristic level of aggressiveness early on, which remains relatively stable across time and situation. One of the first explanations that comes to mind is that aggression must be constitutionally or genetically determined. To a certain extent, this may very well be the case. We ourselves have data demonstrating the consistency of aggressive behavior over three generations (Huesmann, Eron, Lefkowitz, & Walder, 1984; Eron, Huesmann, Dubow, Romanoff & Yarmel, 1987). However, over and above whatever equipment the infant is born with, aggression as a way of interacting with other persons is learned, as we and others have demonstrated, from a

developing youngster's interactions with the environment. The most significant part of that environment, for the vast majority of children, is the parents. Parents teach children aggression by the models of behavior they present, the reinforcements they provide for aggressive behavior, and the conditions they furnish in the home that frustrate and victimize the child. In this chapter, we focus on the contribution that parents make to the characteristic aggressive responding of their children.

Among the parent variables that have been implicated in the etiology of aggression are inconsistent parental disciplinary practices (McCord, 1979; Patterson & Stouthamer-Loeber, 1984) parental disharmony (Farrington & West, 1971; Wadsworth, 1979), parental rejection (Olweus, 1980), harsh punishment (Andrew, 1981); father absence (Hoffman, 1971); parental modeling (Neapolitan, 1981; West & Farrington, 1973); lack of parental supervision, (Farrington, 1983); and family history of antisocial behavior (Osborn & West, 1979; Robins, West, & Herjanic, 1975).

Recent theoretical formulations have stressed the importance of a child's cognitive capacities and information-processing procedures in the learning of aggressive behavior (Dodge, 1980; Dodge & Somberg, 1987; Huesmann, 1986; Huesmann & Eron, 1984). The theories have differed in terms of exactly what is learned, whether attitudes, perceptual biases, response biases, or scripts, and programs for behavior. Our own formulation stresses the importance of scripts for social behavior that serve as cognitive representations of personality traits (Huesmann & Eron, 1989). In any case, however, learning is hypothesized to occur both as a result of one's own behaviors and the environment's response to those behaviors (i.e., enactive learning) and/or as a result of viewing the behavior of others in the environment (i.e., observational learning). For example, under certain conditions a child's exposure to others behaving aggressively will increase the chances that a child will respond to frustration and victimization with aggression. However, the transformation of the child's initial aggressive behavior into habitual aggressive behavior may depend as much on the responses of the child's environment to the aggression, the continuance of precipitating factors, and the convergence of other causal factors as on the initial exposure to violence.

Parents can provide critical input into both the enactive and observational learning processes. The parents' aggressiveness, punitiveness, and rejection serve both as reinforcements and as models of behavior for children to observe and incorporate into their own behavioral repertoires, especially when children observe the rewards that such behaviors provide. Furthermore, children's cognitive processes may well be influenced by the parents' own cognitive processes; for example, parents who view the world as hostile are apt to have children who view the world as



hostile. In addition, parents can intervene to reinforce their children's aggressive and prosocial responses differentially, to moderate their children's exposure to aggressive scripts, and to convince their children that the violent solutions to social problems that they are observing or utilizing are not realistic or adaptive. Such interventions would reduce the likelihood that the children would encode the aggressive scripts that they see, or utilize the aggressive scripts that are encoded. Equally important, parents can intervene to help their children learn prosocial scripts that will compete with aggressive scripts as guides for behavior (Eron, 1986).

We have had the opportunity to investigate the influence of parental variables on the development of aggressive behavior in the growing child in two large-scale longitudinal studies. In the first study, begun in the Spring of 1960 in a semirural county of New York State, we followed 632 children out of a total of 875 studied when they were in the third grade to age 30 in the summer of 1981. During the first phase of the study, in 1960, we had also interviewed the subjects' parents. The most notable result of this study was the finding that early childhood aggression, as observed in school, is correlated with adult antisocial and criminal behavior. The best predictor to later aggression was early aggression. The second study consisted of 3-year longitudinal investigations that we conducted between 1977 and 1983 in five countries—the U.S.A., Australia, Finland, Poland, and Israel. The focus of this study was the relation between television habits and the development of aggressive behavior. Indeed, we found such a relation in all five countries. However, in both of these longitudinal studies, we also found significant relations with parent variables that seemed to exacerbate or mitigate the relation of these and other independent variables to concurrent and/or subsequent aggressive behavior.

It is our purpose in this chapter to integrate the findings of both studies so as to gain a comprehensive understanding of the processes through which parental behavior and attitudes can lead to the learning of aggressive behavior in children.

## MEASURES

We refer to three measures of parent behavior that have figured prominently in our previous writing: rejection, punishment for aggression, and identification. In the long-term study, these data were collected from the parents just once, when the subjects were 8 years old. In the 3-year study, the data were collected from the parents at the start of the investigation when half of the subjects were 6 years old and half of them were 8 years old and then again at the end of the study. This was the

same in all the countries except Israel, where no parent data were collected, and in Poland, where parent data were collected only in the first phase of the investigation.

**Rejection** was operationalized as the number of changes in the child's behavior and characteristics (not including aggression) desired by the parent, for example, Do you think *NAME* wastes too much time? Are you satisfied with *NAME'S* manners? There were 10 such items. That parent was considered accepting of the child who indicated that his or her needs were satisfied by the child: "I like you the way you are."

**Punishment for aggression** was defined as rewards and punishments of various intensities administered by parents contingent upon the child's aggressive behavior. The scale itself consisted of 24 items having to do with likely responses of the parents to four kinds of aggressive behavior on the part of their children, two dealing with aggression toward the parent and two with the aggression toward other children. Two specific punishments at each of three levels of intensity were assigned to each of the four items, for example, if *NAME* were rude to you, would you:

1. Tell him/her I will give you something you like if you act differently.
2. Wash out his/her mouth with soap.
3. Remind *NAME* of what others will think of him/her.
4. Say, "Get on that chair and don't move until you apologize."
5. Tell *NAME* that young men (ladies) don't do this sort of thing.
6. Spank *NAME* until he/she cries.

**The Identification** measure of the child with his or her parents was a difference score between the child's and parent's self-ratings on a series of 18 bipolar adjectives having to do with expressive motor behavior, such as eating, walking, talking, and so forth. The less discrepancy between the child's score and that of either parent, the closer the identification with the parent was assumed to be. Thus, identification was operationalized as perceived similarity in expressive behavior. Because this measure correlated highly with measures of confession and guilt over being naughty, we also interpreted this identification measure as an indication of internalization of parental standards for behavior.

In the 3-year longitudinal study, the same type of discrepancy procedure was used to measure identification. However, discrepancy was measured by comparing the subject with his or her mother on nine items concerned with fantasy behavior, television realism, and television viewing[1]. The rejection and punishment measures in the 3-year study were identical to those in the longer (22-year) study.



**The dependent aggression measures** in the 22-year study included a concurrent peer nomination measure at age 8; two measures of aggression taken 10 years later, peer nominations and self-rating on the MMPI scales $F + 4 + 9$ (Huesmann, Lefkowitz, & Eron, 1978); and 10 measures of aggression and criminality compiled 22 years later, including self-ratings, ratings by subject's spouse, and data obtained from the Criminal Justice Division regarding number and seriousness of arrests and convictions.

**The dependent aggression measures** in the 3-year study included peer ratings at the initial phase of the study as well as in the second and third phase of data collection one year apart.

## RESULTS

Because we had data obtained independently from both mothers and fathers of the subjects, it was possible first of all to determine how well the way in which they evaluate their interactions with their children agree. Intercorrelations of parental measures are presented in Table 7.1 for both the 22- and the 3-year study. It is obvious that there is considerable agreement between mothers and fathers in how they evaluate their interactions with their children. It is also apparent that the three parental variables are reasonably independent of each other, although there is some agreement between the way individual parents evaluate one variable and the way they evaluate the other two, suggesting that there may be some carryover. However, parents agree with one another on a given variable more than they agree with themselves on the three variables. There is also remarkable similarity between the correlations obtained in both studies. Thus, it is unlikely that there is a significant carryover or halo effect from one variable to another. Further, in a series of factor analyses, the three parent variables were found to load heavily on separate factors (Eron, Walder, & Lefkowitz, 1971).

The correlations in Tables 7.2 & 7.3 indicate that there is a moderate amount of communality between the information provided us by the parents of our subjects in the first phase of the study and the multiple

[1]The reason for the change was that the items related to expressive motor behavior were not included in the interview for the 3-year study. The identification measure for the 3-year study was adapted by Laurie Miller (1988). The items used for this post hoc derived measure were all items that were common to the mother and child interviews.

TABLE 7.1
Intercorrelations of the Parent Variables

| | *M Rej* | *M Pun* | *Low M Ident* | *F Rej* | *F Pun* |
|---|---|---|---|---|---|
| | 22-Year Study ($N$ = 535) | | | | |
| Mother Rejection | | | | | |
| Mother Punishment | .19** | | | | |
| Low Mother Identification | .06 | .19** | | | |
| Father Rejection | .45*** | .13+ | .06 | | |
| Father Punishment | .07 | .35*** | .22** | .14+ | |
| Low Father Identification | .00 | .16* | .53*** | .07 | .19* |
| | 3-Year Study ($N$ = 380) | | | | |
| Mother Rejection | | | | | |
| Mother Punishment | .24*** | | | | |
| Low Mother Identification | .05 | .07 | | | |
| Father Rejection | .63*** | .16* | .06 | | |
| Father Punishment | .16* | .42*** | .16* | .21* | |
| Low Father Identification | .04 | .22* | .48*** | .15* | .05 |

***$p < .001$
**$p < .01$
*$p < .05$
+$p < .10$

TABLE 7.2
Correlations Between Parent Variables and Aggression Measures—
22-Year Study
Female Subjects

| | *Rejection* | | *Punishment* | | *Low Identification*[x] | | *Sum of Rej, Pun, Id* | |
|---|---|---|---|---|---|---|---|---|
| *Aggression Measure* | *r* | *N* | *r* | *N* | *r* | *N* | *r* | *N* |
| *Age 8* | | | | | | | | |
| Peer-Nominated Aggression | .28*** | 229 | .30*** | 229 | .20** | 187 | .43*** | 187 |
| *Age 19* | | | | | | | | |
| Peer-Nominated Aggression | | | | | .20* | 127 | | |
| MMPI Aggression | | | .18* | 155 | | | | |
| *Age 30* | | | | | | | | |
| No. of Arrests | .16* | 175 | | | | | | |
| No. of Convictions | .16* | 175 | | | | | | |
| Seriousness of Arrests | .18* | 175 | | | | | .15+ | 144 |
| Violence of Crimes | .13+ | 175 | | | | | | |
| Actual Punishment of Child | | | | | | | .27* | 58 |
| Imagined Punishment of Child | .14+ | 171 | .25*** | 171 | .23** | 137 | .35*** | 137 |
| Self-Rated Aggression | | | .13+ | 171 | | | .18* | 137 |

[x]low identification = Mother + Father





TABLE 7.3
Correlations Between Parent Variables and Aggression Measures—
22-Year Study
Male Subjects

| | *Rejection* | | *Punishment* | | *Low Identification*[x] | | *Sum of Rej, Pun, Id* | |
|---|---|---|---|---|---|---|---|---|
| | *r* | *N* | *r* | *N* | *r* | *N* | *r* | *N* |
| *Age 8* | | | | | | | | |
| Peer-Nominated Aggression | .19*** | 306 | .23*** | 306 | .24*** | 274 | .36*** | 274 |
| *Age 19* | | | | | | | | |
| Peer-Nominated Aggression | | | .14+ | 166 | .14+ | 153 | .15* | 153 |
| MMPI Aggression | .20** | 166 | | | | | .17* | 153 |
| *Age 30* | | | | | | | | |
| MMPI Aggression | .16* | 161 | .17* | 161 | | | .19* | 145 |
| No. of Arrests | | | .21*** | 284 | .12* | 252 | .21*** | 252 |
| No. of Confictions | | | .25*** | 284 | | | .20*** | 252 |
| Seriousness of Arrests | | | .13* | 284 | .14* | 252 | .11+ | 252 |
| Violence of Crimes | | | .12* | 284 | .13* | 252 | .16** | 252 |
| Actual Punishment of own Child | | | .34** | 54 | | | | |
| Imagined Punishment of Child | | | .18* | 164 | | | | |
| Frequency of Spouse Abuse | | | | | .34** | 70 | | |
| History of Spouse Abuse | | | .20+ | 80 | .21+ | 70 | .21+ | 70 |
| Self-Rated Aggression | | | .23** | 164 | .16 | 148 | .24** | 148 |

[x]Low identification = Mother + Father

measures of aggression and antisocial behavior obtained from and about the subjects themselves some 22 years later. The final column in the tables presents the correlation of the sum of the three standard scores on each of the antecedent variables with the criterion variables. Considering the length of time between the two data collection phases and the different sources of information for antecedent and consequent variables, the findings are quite remarkable. The same order of correlation between parent variables and school aggression was obtained in the cross-national study. Rejection and punishment by parents were at least moderately related to how aggressive the children were in school in all four countries (Huesmann & Eron, 1986).

One might wonder whether the correlations between the parent variables and the child's aggression are due to a single child-rearing factor or whether each parent behavior relates independently to aggression. The data from both studies suggest the latter explanation. As the regressions in Figs. 7.1 and 7.2 show, the parent variables generally predict aggression independently of each other.

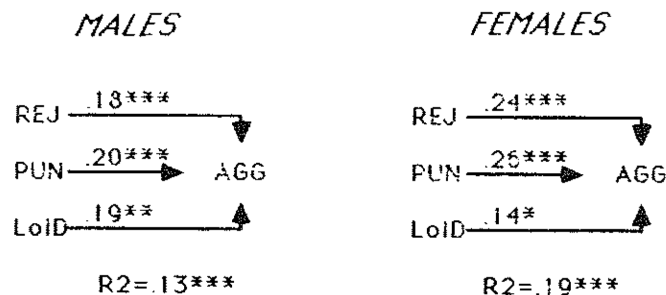


FIG. 7.1. Synchronous regressions relating parent behaviors to child aggression in the 22-year study.

Table 7.4 shows the mean aggression scores of all those subjects in the 22-year study whose parents scored above or below the median on all three parent variables. One should note that for males the means are at least marginally significant on all of the major aggression measures. For females, the difference on "imagined punishment of child" is particularly significant. (See section on Punishment ahead for description of measure of "imagined punishment of child.") Those scoring above the median on all three variables should be the youngsters most at risk for developing antisocial behavior patterns before reaching adulthood; and indeed, on the average, each of the male subjects in the above the median group has had at least one arrest before age 30. In the below-the-median group, the subjects are eight times less likely to have been arrested, and only one in five actually had such a record.

These data seem to indicate that parents do indeed have an important impact on whether or not their children will, in the future, engage in the type of antisocial behavior that can bring them into conflict with the law, their peers, and their own family members. However, as we noted in the beginning of this chapter, the best predictor to aggression of the subjects as adults was how aggressive they were as children. When we examined the probable causal effects of these parent variables, measured when our subjects were 8 years old, on the various indices of aggression as adults, controlling for how aggressive they were at age 8, much to our surprise we found that for boys the probable causal effect vanished on all adult measures. For girls, however, some interesting causal effects remained. The more harshly girls were punished for aggression at age 8, the more harshly did they punish their own children, the more abusive were they toward their spouses, as reported by their spouses, and the more prone



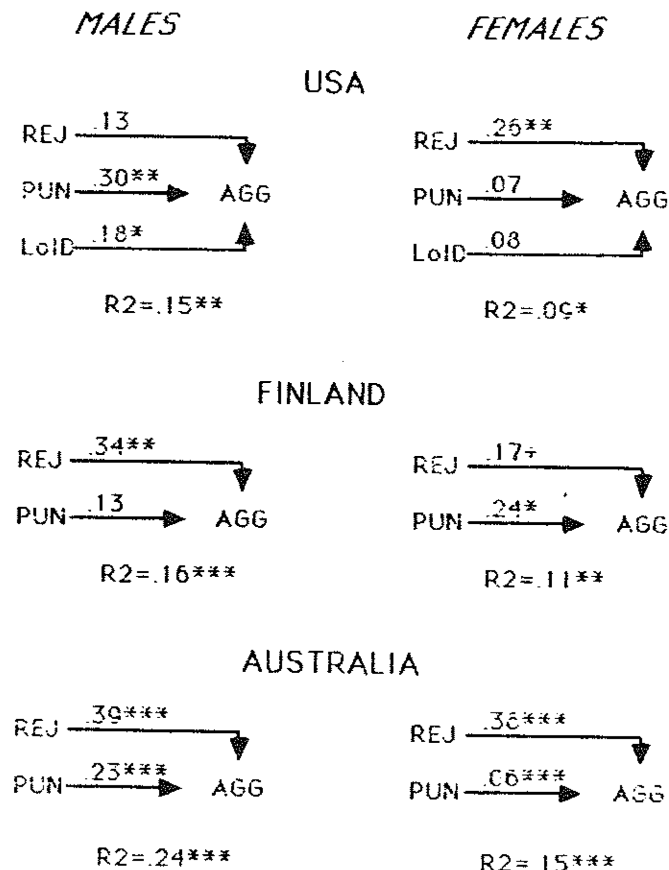


FIG. 7.2. Synchronous regressions relating parent behaviors to child aggression in the 3 year study.

were they to respond with aggression and violence in many situations according to self-ratings.

Turning to the 3-year study, Table 7.5 presents the correlations between each of the three parent variables in the first year and peer-nominated aggression in each of the 3 years of the study. Scores on each of the variables were converted to standard scores and the three parent variables were summed, as shown in the last column of the table, giving an indication of total parental impact on the development of aggression. The correlations between the sum of the three variables and aggression

TABLE 7.4
Mean Aggression Score of Subjects Whose Parents Scored Above or Below The Median on All Three Parent Variables in 22-Year Study

| Aggression Measure | Females | | | Males | | |
|---|---|---|---|---|---|---|
| | *Above* | *Below* | *t* | *Above* | *Below* | *t* |
| *Age 8* | | | | | | |
| Peer-Nominated Aggression | 16.30 | 3.94 | 3.64*** | 21.03 | 8.24 | 3.76*** |
| *Age 19* | | | | | | |
| MMPI Aggression | 175.36 | 179.14 | .50 | 196.25 | 178.10 | 2.20* |
| *Age 30* | | | | | | |
| MMPI Aggression | 165.57 | 161.04 | .63 | 182.79 | 164.92 | 2.01+ |
| No. of Arrests | .11 | .00 | 1.73+ | 1.69 | .21 | 1.83+ |
| No. of Confictions | .06 | .00 | 1.18 | .89 | .08 | 1.78+ |
| Imagined Punishment | 28.57 | 10.00 | 2.62*** | 33.57 | 17.78 | 2.06* |
| Self-Rating Aggression | 33.36 | 16.00 | 1.16 | 100.00 | 3.69 | 3.70** |

were somewhat higher for both boys and girls than when each of the variables was considered by itself. Thus, the sum seems to be a good indication of the effect of parent behaviors on the development of aggression.

Indeed, Table 7.6, which presents correlations summed for all years in which measurements were taken, indicates a correlation of .50 for boys

TABLE 7.5
Correlations Between Parent Variables at Time 1 and Aggression Measures 3-Year Study

| Aggression Measure | Year | N | Rejection | Punishment | Low Identification | Sum of Rej, Pun, Id |
|---|---|---|---|---|---|---|
| | | | Females | | | |
| Peer-Nominated Aggression | 1 | 286 | .17** | .17** | .04 | .24*** |
| Peer-Nominated Aggression | 2 | 250 | .13* | .18** | .09 | .22*** |
| Pear-Nominated Aggression | 3 | 213 | .19** | .11 | .17* | .27*** |
| | | | Males | | | |
| Peer-Nominated Aggression | 1 | 263 | .26*** | .28*** | .13* | .37*** |
| Peer-Nominated Aggression | 2 | 233 | .13* | .28*** | .13+ | .33*** |
| Peer-Nominated Aggression | 3 | 202 | .17* | .17** | .07 | .25*** |

***$p < .001$
**$p < .01$
*$p < .00$
+$p < .10$



TABLE 7.6
Relation of Parent Variables Measured at years 1 & 3 to Sum of Aggression Measures at Years 1, 2, & 3

| Aggression Measure | Rejection | | Punishment | | Low Identification | | Sum of Rej, Pun, Id | |
|---|---|---|---|---|---|---|---|---|
| | *r* | *N* | *r* | *N* | *r* | *N* | *r* | *N* |
| Girls' Aggression | .31*** | 137 | .08 | 137 | .12 | 108 | .30*** | 108 |
| Boys' Aggression | .26** | 140 | .35*** | 140 | .22* | 119 | .50*** | 119 |

and .30 for girls, both highly significant, between the parent variables we measured and the appearance of aggressive behavior in school. This is of exactly the same order as the estimated stability of aggression derived from the 22-year study (Huesmann et al., 1984). Those stability figures were .50 for boys and .35 for girls.

Thus, it seems from the 3-year study, at least, that some parental behaviors are indeed important in determining whether children will develop aggressive habits that can place them in conflict with society. This is the case because it has been demonstrated elsewhere that these very school behaviors that we have shown to be related to parental practices are themselves predictive of adult antisocial behavior (Huesmann et al., 1984). However, because they are related, this does not mean, as we all know, that the parental practices are causing the aggressive behavior. Perhaps parental rejection and punishment are reactions to the aggressive behavior that the youngster originally displays, and lack of identification then results from the aversive nature of the interaction between parent and child.

## Rejection

When the rejection scale was constructed, 30 years ago, we were concerned with this very question of parental rejection versus child rejectability—that is, was rejection of the child less a characteristic of the parent than it was of the child? There are certain children who might just be rejectable because of some inherent or early-appearing deficit or behavior that would make it unlikely that others would be attracted to them or approve of them. This belief was supported at that time by the high correlation found in pilot studies between rejection by the mother and father ($r$ = .64) and between rejection by the parents and rejection by peers ($r$ = .35 for mothers and .20 for fathers) as well as between rejection by parents and aggression in school ($r$ = .40 for mothers and .31 for fathers). Therefore, a number of items were added to the scale of parent

rejection in order to tap the parent's emotional reaction in response to the child's undesirable behavior. The revision did not alter the obtained relation to school aggression, strengthening our conviction that the original 10-item scale reflected the parent's behavior more than the child's behavior.

Rejection by peers was measured at the time by one item on the peer nomination inventory, "Who do you wish was not in your class at all?", which was later eliminated from the peer nomination procedure for ethical reasons and also because, in a factor analysis, this item loaded heavily on a general aggression factor (Walder, Abelson, Eron, Banta, & Laulicht, 1961). In both the 22- and 3-year studies, we did ask two popularity questions, "Who are the children you would like to have for your best friends?" and "Who would you like to sit next to in class?" Indeed, in both studies, we found negative correlations between popularity among peers, as indicated by this measure, and rejection by parents. Further, the correlation between mother and father rejection, in the 22-year study, as indicated in Table 7.1, was .45, and it was .63 in the 3-year study. Although the rejection measures used in the two studies were the same, the 3-year correlations were not quite as high as in the earlier study; however, they still clearly indicate that children rejected by their parents tend also not to be accepted by their peers. Correlations range from −.14 to −.27 for girls, and from −.21 to −.30 for boys between rejection by parents and popularity among peers. Further, in the 22-year study, there seems to be an incremental effect in the relation to aggression as peer rejection is added to parental rejection. Table 7.7 includes the mean aggression score of those children rejected only by peers, only by parents, by both peers and parents, and by neither parents nor peers. For boys as well as girls, those rejected by both their peers and their parents have a somewhat higher mean score. What is most interest-

TABLE 7.7
Mean 3rd-Grade Aggression Scores of Subjects Above Median on Rejection in 22-Year Study

| *Rejection By* | *Females* | | *Males* | |
|---|---|---|---|---|
| | *Mean Score*[1] | *N* | *Mean Score*[1] | *N* |
| Parents | 6.25 | 39 | 15.39 | 64 |
| Peers | 10.73 | 61 | 17.50 | 90 |
| Peers + Parents | 13.96 | 6 | 18.26 | 69 |
| Neither Parents nor Peers | 4.83 | 88 | 9.13 | 104 |

[1]Mean score of all those subjects above the median on rejection by the group or groups indicated.



ing, however, is the exceptionally low mean score on aggression of those scoring below the median on both parent and peer rejection. The overall significance for this table is $F(3,252) = 10.14$, $p < .0001$ for girls and $F(3,323) = 8.06$, $p < .0001$ for boys.

In Tables 7.8 and 7.9 we present longitudinal regression predictions of adult aggression in our 22-year study from parenting behaviors when the subject was 8 years old. From these regressions, we can see that early rejection of the child is related significantly to several adult measures of aggression.

These data, however, still leave us with the question of whether rejection by the parent perhaps sets up an emotionally frustrating situation at home, which leads the child to act out aggressively in school, or whether the youngster's unacceptable behavior leads to rejection by the parent. We could not answer this question with the 22-year data because we had a measure of parental rejection only at one time—at the beginning of the study. However, in the 3-year study, we were successful in obtaining parent interviews at both the initial and final phases of the study, and it was possible to distinguish between these possibilities (Huesmann & Eron, 1986). In the United States, early aggression for boys is a significant predictor for later rejection even after effects of parents' early rejection are partialled out. However, the converse is not true. Early rejection is not predictive of later aggression once initial aggression is partialled out. Thus, parental rejection seems to be more a response to child aggression than a cause of aggression in the United States sample.

TABLE 7.8
Regression Prediction of Aggression Measures from Parent Variables—22-Year Study
Female Subjects

| | *Standardized Coefficients for Age 8 Predictors* | | | | |
|---|---|---|---|---|---|
| *Criterion* | *Rejection* | *Punishment* | *Low Identification* | $R^2$ | *N* |
| *Age 8* | | | | | |
| Peer-Nominated Aggression | .24*** | .26*** | .14* | .19*** | 186 |
| *Age 19* | | | | | |
| Peer-Nominated Aggression | .10 | .00 | .21* | .05+ | 126 |
| *Age 30* | | | | | |
| No. of Arrests | .16+ | .04 | .10 | .03 | 143 |
| No. of Confictions | .19* | .08 | .12 | .05 | 143 |
| Seriousness of Arrests | .33* | .06 | .11 | .13 | 35 |
| Violence of Crimes | .32+ | .03 | .06 | .10 | 35 |
| Actual Punishment of own Child | .16 | .23+ | .01 | .10 | 57 |
| Imagined Punishment of Child | .09 | .26** | .19* | .13*** | 136 |

TABLE 7.9
Regression Prediction of Aggression Measures from Parent Variables—
22-Year Study
Male Subjects

| Criterion | *Standardized Coefficients for Age 8 Predictors* Rejection | Punishment | Low Identification | $R^2$ | N |
|---|---|---|---|---|---|
| *Age 8* | | | | | |
| Peer-Nominated Aggression | .18** | .20*** | .19** | .13*** | 273 |
| *Age 19* | | | | | |
| MMPI Aggression | .19* | .04 | .02 | .04+ | 152 |
| *Age 30* | | | | | |
| MMPI Aggression | .10 | .17* | .03 | .05+ | 144 |
| No. of Arrests | .05 | .22*** | .08 | .06** | 251 |
| No. of Confictions | .01 | .26*** | .06 | .08*** | 251 |
| Violence of Crimes | .01 | .13 | .23+ | .09 | 61 |
| Actual Punishment of own Child | .01 | .38** | .23 | .15+ | 47 |
| Imagined Punishment of Child | .00 | .15+ | .06 | .03 | 147 |
| Frequency of Spouse Abuse | .22* | .12 | .38** | .17** | 69 |
| Self-Rating of Aggression | .04 | .23** | .12 | .08** | 147 |

In Finland, as in the United States, rejection is more predictable from aggression than vice versa, supporting the idea that rejection of children by their parents is more a response to their childrens' aggressive behavior than an instigation to aggression. In Poland, the analysis could not be done because just one wave of parent data was collected there. Only in Australia is rejection a significant predictor of later aggression even when early aggression is controlled.

## Punishment

The effect of punishment on antisocial aggression is quite independent of the effect of rejection, as indicated in the multiple regression in the 22-year study (Tables 7.8 & 7.9). For female subjects, parental punishment makes an independent contribution to aggression at age 8 as well as to two measures of aggression obtained from the subjects at age 30. At that time, all subjects were asked to imagine how they would respond if they had an 8-year-old child who engaged in a variety of aggressive behaviors, the very same questions their parents were asked 22 years earlier. This was the measure of *imagined punishment*. Those subjects who indeed had children of that approximate age were also asked what they actually did in response to such behaviors. This was the measure of *actual*



*punishment*. Thus, punishment of the subjects by their parents, measured 22 years earlier, related to the variation in both of these aggression measures independently of rejection. For males, parental punishment seemed to be an even better predictor of aggression than for females, relating independently not only to 8-year-old peer-nominated aggression and to the two age-30 measures of aggression that were significant for females, but also to two age-30 measures of self-rated aggression as well as to the number of arrests and convictions for criminal behavior. Punishment by parent also was marginally related to peer-nominated aggression 10 years later and to spouse abuse, as reported by spouse, 22 years later.

In the 3-year study we found bivariate correlations between punishment and aggression of similar magnitude as with rejection and the same relation between early and later aggression and early and later punishment. Furthermore, as with rejection, early aggression was a significant predictor of later punishment, even after effects of early punishment were partialled out. However, early punishment was not predictive of later aggression once early aggression was partialled out. Thus punishment also seems to be more a response to aggression than a cause of aggression. Similar results were obtained in Finland and Australia for both boys and girls.

## Identification

Low identification with parents for females (Table 7.8) related only to peer-nominated aggression at age 8 and 19 and to imagined punishment of child at age 30. For males (Table 7.9) there were significant independent relations only for concurrent aggression at age 8 and frequency of spouse abuse 22 years later. There was a marginally significant relation to violence of crimes committed.

In the 3-year study in which a different measure of identification was employed (Miller, 1988), when aggression over the three phases of the study and identification at the first and last phase were correlated, low identification correlated significantly with aggression only for boys (Table 7.6). Thus, in both the 3-year and the 22-year studies, low identification seems to be a more important variable for boys than it is for girls.

However, regression analyses revealed interesting information about the direction of the relation when predicting from first-year low identification to third-year aggression as well as from first-year aggression to third-year low identification. For girls, low identification with mother in the first year significantly predicts to child aggression in the third year with aggression in the first year partialled out, but there were no similar

effects for boys. For boys, on the other hand, early aggression predicts to later low identification with early identification partialled out. There was no similar effect for girls (Miller, 1988). Thus, it appears that aggression in boys must be very aversive to parents, leading to rejection, harsh punishment, and perhaps, because of the aversive quality of these parental behaviors directed at children, to low identification with the parents.

It may be recalled that in the earlier study, as described elsewhere (Eron, 1987), we had found that low identification was an important mediator in the relation between punishment and aggression for boys. This finding bears repeating here. For boys who were highly identified with their fathers, punishment that the father administered for aggressive behavior by the child tended to inhibit aggression. However, if boys were not highly identified, any punishment the fathers administered seemed to exacerbate the aggression. Further, we found in that study that children tended not to identify with highly aggressive parents, and as long as a youngster identified with one parent, whether mother or father, he or she tended not to be aggressive.

The interaction of punishment and identification highlights the importance of a child's cognitions in determining whether or not he or she will use aggression as an interpersonal problem-solving tactic. A child who identifies with a parent, that is, who has incorporated the standards of the parent, probably interprets punishment as an appropriate response to bad behavior. Such a child probably attends to the standards set by the parent rather than the nature of the punishment used to enforce those standards. However, the unidentified child who has not incorporated those standards interprets the parents' punitive behavior as a way of forcing someone to comply with an arbitrary set of rules. In the latter case, the instigatory quality of the interaction becomes more important than the expected inhibitory nature of the punishment, and the lesson learned is "you get what you want by beating up on other persons."

## DISCUSSION

What is the significance of these results in helping us understand how parents influence their children's behavior? On the surface, they seem to suggest that individual differences in parental child-rearing styles have very little effect on the development of aggression, at least after the age of 6. With some exceptions, the parental differences seem to be more a function of differences in the children's aggression than causes of the children's aggression. This is not at variance with other studies relating



aspects of child rearing to later measures of personality (McCrae & Costa, 1988; Plomin, Loehlin, & DeFries, 1985; Scarr, Webber, Weinberg, & Wittig, 1981). Nevertheless, a number of aspects of the data suggest that the picture is more complex than this. First, harsh parental punishment of some girls clearly seems to make it more likely that they will behave aggressively towards those close to them when they are adults. Second, there are trends in some subsamples that suggest that excessive punishment and rejection do indeed stimulate greater aggression (e.g., in Australian boys). Third, it is clear that the relations between aggression and the different child-rearing variables are not explained by a single factor or else they would not have independent relations with aggression in multiple regression analyses. These child rearing practices do seem to have their individual effects.

We have been arguing for some time that individual differences in childhood aggression are primarily learned. We view social behavior as controlled by scripts that are learned at a very young age and become very resistant to change, promoting stability of aggressive behavior over time. The current data suggest that such learning must take place even before age 6 if these parental factors are to have much of an effect, because they certainly do not have much of an effect after age 6. Furthermore, the lack of a relation from earlier parental rejection and punishment to later aggression over the 22 years of our study may reflect the statistical aggregation of several different learned responses to parental rejection and punishment. Although we could not find any variable that seemed to mitigate or exacerbate the effects of rejection and punishment, there may well be some that were not measured by us. For example, whereas some severely punished children may encode scripts for aggressive behavior based on the observed punishments, others may see how ineffective the punishment actually is in changing their own behavior and therefore may not encode such scripts. Aggregated data from these two groups of subjects, thus, would reveal little evidence for an effect of punishment on aggression. Similarly, it may be that aggression is only one of the ways in which children react to rejection. Some children may withdraw from rejecting parents and rejecting peers and shun social contacts altogether. Again, aggregated data would reveal no relation. This seems to argue for more studies of highly selected groups of subjects followed for a number of years, or even individual case studies (see, e.g., chapter 9, this volume).

One piece of data in support of the notion that different processes are operating in different children is the enhanced results that obtain when children who score at the upper end on all the child-rearing measures are compared to those scoring high on only one. If the same processes

were responsible for placement of these children at the higher end of rejection, punishment, and lack of identification, then one would not expect any greater aggression among those who score highly on all three than among those who score highly on only one. The rejected children, who also do not identify with their parents and who are harshly punished, may be those very children for whom few alternatives are possible except aggression. And, indeed, they are the most antisocially aggressive individuals over the 22-year span.

However, if aggression is a learned behavior and is learned primarily within the home, evidence for this must come from studies done with children before the age of 6. By the time youngsters are 6, patterns of aggressive behavior seem so well established that they persist into adulthood despite what must be a wide variety of environmental contingencies and events, including varied parental child-rearing practices and other interpersonal behaviors.

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# Commentary

# Expanding the Perspective on Contributing Factors and Service Delivery Approaches to Childhood Aggression

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Family influences, particularly parenting influences, on the social and emotional development of children have played a central role in social learning theories of childhood and adolescent aggression for many years (Bandura & Walters, 1959; 1963; Sears, Maccoby, & Levin, 1957). No one has contributed more to research and theory in this tradition during the past three decades than Leonard Eron and Gerald Patterson. In the previous two chapters, these two outstanding scientists and their colleagues presented findings from recent longitudinal studies that were designed, in part, to provide further insights into the nature of parental influences on aggressive children. This commentary highlights some of the interesting findings from their work and then discusses implications of this research for intervention approaches to the problems of aggressive and antisocial youth.

## PATTERSON, CAPALDI, AND BANK

Beginning with a pioneering study in 1967 (Patterson, Littman, & Bricker; 1967) Gerald Patterson and his colleagues at the Oregon Social Learning Centre have made enormous contributions to the literature on childhood aggression and antisocial behavior. Patterson's coercion model (Patterson, 1982; Patterson, DeBaryshe, & Ramsey, 1989) is concerned with explaining how some young children learn to engage in antisocial behaviors (fighting, temper tantrums, and noncompliance) as a result of poor family management practices by parents. Patterson,