

Childhood Correlates of Adult Ego Development

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DUBOW, ERIC F.; HUESMANN, L. ROWELL; and ERON, LEONARD D. *Childhood Correlates of Adult Ego Development*. CHILD DEVELOPMENT, 1987, 58, 859–869. The present study examined family socioeconomic indicators, parent child-rearing variables, and childhood and adolescent behaviors, which were hypothesized to predict adult ego development. The subjects were 206 females and 192 males, ages 30–31, who began participating in a longitudinal study at age 8. At that time, interviews with their parents yielded data on family background variables and child-rearing practices. Peer-nominations and other testing procedures with the children yielded data on the children's cognitive and behavioral styles at ages 8 and 19. At age 30, the subjects completed the Loevinger Sentence Completion Test of Ego Development. Results confirmed the hypotheses that child-rearing styles characterized by acceptance, a nonauthoritarian approach to punishment, and identification of the child with the parent related to higher levels of adult ego development 22 years later. These relations obtained more strongly for females than for males. In addition, childhood and adolescent indicators of impulse control and cognitive development (nonaggression, prosocial behavior, and intelligence) were associated with higher levels of adult ego development. Finally, hierarchical multiple regression analyses indicated that the development of aggression was linked to adult ego level attainment in males, while the development of prosocial behavior was related to adult ego development in females.

Loevinger (1966, 1976) has developed a stage theory of ego development—a sequence of increasingly mature stages of functioning across the domains of interpersonal relations, impulse control, moral development, and cognitive style. She draws her stage descriptions from theories of moral development (Kohlberg, 1973), the development of interpersonal relationships (Sullivan, Grant, & Grant, 1957), and ego psychology (see Blanck & Blanck, 1974).

Loevinger's conceptualization of ego development comprises five stages and four transition levels between stages. Individuals characterized by low levels of ego development exhibit impulse control problems and tend to view others in terms of what others can give them. A higher stage of ego development (Conformist) describes individuals who obey rules to achieve group acceptance; these individuals view others only in terms of external characteristics (overt behaviors) without

an appreciation for motivations and feelings underlying behavior. At the next level, the Self-Aware individual begins to exhibit an awareness of the self as not always living up to societal norms and begins to view others in terms of psychological characteristics. This is the modal level of ego development for individuals in our society. Individuals at still higher levels are characterized as possessing long-term, self-evaluated goals, are capable of self-criticism, and cherish interpersonal relationships (see Loevinger, 1976, for a more complete description).

In order to assess an individual's level of ego development, Loevinger and Wessler (1970) developed a 36-item sentence-completion test. Holt (1980) obtained norms on a 12-item short form of this test, reporting inter-rater reliabilities similar to those of Loevinger, and internal validity which is sufficient to warrant the more general use of this form.

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Much of the research utilizing Loevinger's sentence-completion test has focused on its relation to the development of other psychological processes. Since ego development is theoretically assumed to cut across several domains of functioning (moral, interpersonal, impulse control, cognitive), scores on the sentence-completion test should be related to scores on measures tapping these areas of functioning. Investigators have found moral development to be related to subjects' scores on the original version of the test (Lieberman, Gaa, & Frankiewicz, 1983; Sullivan, McCullough, & Stager, 1970). For example, Lieberman et al. (1983) reported a significant positive relation between graduate students' scores on Loevinger's measure and their scores on Kohlberg's Moral Development Inventory. Investigators have also found that impulsiveness is related to scores on Loevinger's test (Kishton, Starett, & Lucas, 1984; Starrett, 1983). Using factor analysis, Kishton et al. (1984) found that young adolescents' impulsivity, as measured by the impulsive and risk-taking scales of Eysenck's Personality Questionnaire, was associated with lower scores on Loevinger's test. Measures of interpersonal and cognitive styles have also been found to be related to ego development (Carlozzi, Gaa, & Liberman, 1983; Lorr & Manning, 1978; Rootes, Maras, & Gordon, 1980). For example, Lorr and Manning (1978) administered to adolescents an inventory tapping interpersonal styles and found that nurturance, conscientiousness, trust, tolerance, interpersonal sensitivity, and psychological-mindedness discriminated between females at high versus low levels of ego development as measured by Loevinger's sentence completion test. The personality inventory results further indicated that both males and females at higher ego development levels were more persistent on tasks and more independent in resisting peer pressure than subjects at lower levels.

Loevinger (1976) began to outline, theoretically, certain factors that might influence ego development, such as the incorporation of parental commands, attitudes, and expectations during childhood. Only recently, however, has research begun to focus on variables presumably related to ego development etiologically, such as family behavior (Bell & Bell, 1982; Hauser et al., 1984; Powers et al., 1983). These studies indicate that ego development in adolescents is related to aspects of family functioning such as parental support and acceptance, and cognitively stimulating behaviors of parents (e.g., problem-solving ability). However, these variables were as-

essed contemporaneously rather than longitudinally, so that drawing causal conclusions is difficult. A longitudinal analysis of the effects of parent child-rearing practices on the child's later ego attainment might elucidate the causal role of family variables in ego development.

Theorists and researchers operating within a social learning framework have investigated the role of child-rearing variables in the development of moral orientation, impulse control, and interpersonal relations—domains comprising Loevinger's concept of ego development. For example, Bandura (1976) argued that, through observational learning and the internalization of parental rules and behaviors, the child develops a self-regulatory capacity enabling him to exercise control over, and to evaluate, his thoughts, feelings, and actions. Indeed, researchers have found that children whose parents are punitive and rejecting exhibit less control over their behavior and lower levels of cognitive development than other children (Eron, Walder, & Lefkowitz, 1971; Gelfand et al., 1974; Hurley, 1967; Lefkowitz, Eron, Walder, & Huesmann, 1977). Other investigators have demonstrated that children exposed to nurturant models, as compared to nonnurturant or neutral models, exhibited greater amounts of self-control, task persistence, and social contacts (Coates, Pusser, & Goodman, 1976; Friedrich & Stein, 1975; Rushton, 1976; Yarrow, Scott, & Waxler, 1973). The results of these studies suggest that parental punishment, rejection, and nurturance are associated with behavioral self-control, cognitive development, and moral development.

Aside from the relations between parenting variables and domains of ego development, one might inquire about relations between specific child behaviors and ego development. This is not a well-investigated area of research. Some investigators have examined contemporaneous relations between ego development and specific behaviors such as responsibility (Blasi, see Loevinger, 1976), helping (Cox, 1974) and delinquency (Frank & Quinlan, 1976) with mixed success. Recently, Noam et al. (1984) reported on the relation between ego development and psychiatric symptoms in 12–16-year-old hospitalized children. They found that a variety of symptoms (e.g., loneliness, crying, arguing, destroying things) correlated negatively with ego development. Theoretically, one might expect aggressive behaviors to be negatively related to ego development since these behaviors are indicative of poor impulse control

and difficulties in interpersonal relations. Conversely, positive social behaviors should be positively related to ego development. Thus, one might expect the development of aggression and prosocial behavior to be related to ego development.

Social learning theorists have demonstrated that childhood behaviors and attitudes are related to the development of cognitive ability and impulse control—components of ego development. For example, Lefkowitz, Eron, Walder, and Huesmann (1977) found that internalization of rules and identification with parents are associated concurrently and longitudinally with lower levels of aggression in children. Huesmann, Eron, and Yarmel (in press) found that early aggression interferes with the development of intellectual functioning. Further, Huesmann, Eron, Lefkowitz, and Walder (1984) reported that aggressiveness at age 8 predicts a variety of impulse control problems at age 30, including criminal behaviors, spouse abuse, and traffic violations. Indeed, Eron and Huesmann (1984) reported that aggression and prosocial behavior at age 8 relate significantly to ego development at age 30 as measured by the Loevinger Sentence Completion Test. They also reported that the child's prosocial behavior at age 8, independent of aggression, predicted ego development at age 30 for both males and females. However, since the focus of that investigation was the relation between childhood prosocial behavior and indicators of adult aggression and other aspects of adult functioning (only one of which was ego development), they did not examine the relation between early prosocial behavior and later ego development in any more detail. Several important areas that were not addressed by Eron and Huesmann (1984) include: the relation between family background variables (SES) and adult ego development and potential sex differences in these relations; the extent to which subsets of childhood variables—for example, parent child-rearing variables, child behavior—are predictive of adult ego development above and beyond the variance accounted for by family background variables and child IQ; and whether similar relations exist between subject variables at age 19 and ego development at age 30.

Thus, a variety of parent child-rearing factors as well as child behaviors are associated with the development of impulse control, cognitive development, and perhaps ego development. The present study examines the longitudinal relations of parent child-rearing variables and child behaviors to adult

attainment of ego development. It is hypothesized that the following child-rearing variables will be related to the individual's level of ego development: nurturance, support, a nonauthoritarian approach to punishment, and the child's identification with the parents. Child variables hypothesized to be related to level of adult ego development include: cognitive abilities such as intelligence and aspirations for attainment, and behavioral characteristics such as aggression and prosocial behaviors.

Method

Subjects.—Three hundred and ninety-eight adults (206 females, 192 males), ages 30–31, served as the subjects. These individuals are part of a longitudinal study of the development of aggression and psychopathology (Eron et al., 1971; Lefkowitz et al., 1977). The original sample ($N = 871$) comprised the entire third-grade population of a semirural, middle-class county in New York State. Seventy-five percent of the subjects' mothers and fathers were also interviewed at that time. At age 19, 427 of the original subjects were reinterviewed. The final phase of the study was conducted when the subjects were 30–31 years of age. Subjects were contacted by mail and by telephone. Addresses were obtained from local directories and a network of informants. The study was publicized in local newspapers. Each subject was paid \$40 for a 2½ hour interview at a field office. Much of the interview was administered by a microcomputer. However, paper-and-pencil measures were also included. Two hundred and ninety-five subjects were interviewed in this way. The remaining 103 subjects were interviewed by mail and by telephone only.

To examine the effects of attrition of the sample, subjects interviewed at age 30 were compared to those who were not interviewed at age 30 on many behavioral variables measured at ages 8 and 19. With one major exception, there were no differences. Male subjects who were interviewed at age 30 had had a significantly lower mean aggression score at age 8 than those who were not interviewed. No differences were found between the males interviewed by mail or in person at age 30. For females, there were no significant differences in aggression between those subjects who were interviewed at age 30 and those who were not. Females interviewed by mail or in person were not significantly different in respect to behavioral variables. The greater attrition of subjects with high levels of aggres-

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sion may reduce the magnitude of any correlations with aggression.

Procedures and measures.—In the first wave of the study, the subjects, then 8 years of age, were administered paper-and-pencil measures in their classrooms. Eron et al. (1971) describe the procedures and measures in detail. Among the measures completed by the children that are used in this study are: (1) Peer Nominations of Aggression: Each child nominated, by circling names provided on a class roster, other children in his or her classroom on 10 items indicative of aggressive behavior (e.g., “Who pushes and shoves other children?”). (2) Peer Nominations of Prosocial Behavior: These peer nominations were made by the children on two items indicative of popularity (e.g., “Who would you like to sit next to in class?”) and two items indicative of anxiety over behaving aggressively (e.g., “Who never fights even when picked on?”). Since these two types of nominations loaded positively on the same factor (Eron & Huesmann, 1984), the items were combined to represent a “Prosocial Behavior” factor. (3) The Child’s IQ was assessed by the California Mental Maturity Scale (Sullivan, Clark, & Tieg, 1957). (4) The Child’s Identification with Parents was measured by the discrepancy between parent and child self-report measures of expressive behaviors. Each child and each parent were asked to respond to a series of bipolar self-descriptive adjectives presented in a semantic differential fashion, for example “I walk”: “slow-fast”; “loud-soft.” If both parents were interviewed, the identification score was the average of the discrepancy between the child’s and mother’s and the child’s and father’s scores; otherwise, the identification score was the discrepancy between the child’s and the interviewed parent’s scores.

Parents were interviewed in their homes during the first wave of data collection as well. Those data derived from parent interviews that will be reported in the present study are also described by Eron et al. (1971). The interview yielded measures of: (1) Father’s Occupational Status, (2) Average Level of Parents’ Education, (3) Authoritarian Punishment, (4) Rejection of the Child, and (5) Nurture Toward the Child. If both parents were interviewed, the average of both parents’ scores on a variable was used; otherwise, the score of the parent interviewed was used.

Father’s Occupational Status was computed by comparing the father’s reported occupation to occupations classified according to the U.S. Bureau of the Census (1960) along

a 10-point scale. The scale was collapsed into three classes—lower, middle, and upper class. Previous research (Lawson & Boek, 1960) found this to be an efficient index. Parents’ Education was rated on a seven-point scale ranging from 1 (graduate or professional training) to 7 (less than seventh grade education). Scores on both Father’s Occupational Status and Parents’ Education were reversed for the analyses so that higher scores would reflect higher occupational and educational statuses.

Authoritarian Punishment was the average of the parent’s scores on two self-report measures: Christie’s Reversed *F* Scale (Christie, Havel, & Seidenberg, 1958), scored for acquiescence, and a harshness-of-punishment scale (Eron et al., 1971). These two scales were found to load highly positively on the same factor (Eron & Huesmann, 1984). Christie’s 10-item Reversed *F* Scale includes such items as, “Human nature being what it is, there must always be war and conflict,” and “What young people need most of all is strict discipline.” Each item is rated along a five-point continuum from “strongly agree” to “strongly disagree.” A parent’s harshness of punishment was measured by asking the parent which punishment behaviors he or she uses or would use in four different situations (e.g., when the child grabs something from another child, when the child is rude). A parent who scored high on harshness of punishment would be one who reported beating the child, washing his or her mouth out with soap, etc. A parent who scored low on harshness of punishment would be one who reported reasoning with the child, etc. The Rejection scale measured the extent to which the parent was dissatisfied with the child. A parent who scored high on Rejection would be one who complained that, among other things, the child is too forgetful, has bad manners, and wastes too much time. The Nurture scale measured both the parent’s knowledge about the child and nurturant behaviors toward the child. A parent who scored low on Nurture would be one who, among other things, does not know what upsets the child, does not know what makes the child happy, and does not take time to talk with the child about the child’s interests.

Ten years later, when the subjects had graduated from high school, an attempt was made to reinterview as many original participants as possible. These interviews were conducted at a field office. The age 19 measures are reported in detail by Lefkowitz et al. (1977). Those variables that will be reported

in the present study include: (1) Peer Nominations of Aggression, (2) Peer Nominations of Prosocial Behavior, and (3) Subject's Occupational Aspirations. The peer nominations collected at age 19 are nearly identical to those collected at age 8, although the wording on several items was appropriately revised for adolescents. For the Subject's Occupational Aspirations, the subject was asked what occupation he or she expected to obtain. The occupation was coded for status in the same manner as that described earlier for Father's Occupational Status.

Finally, in the last phase of the study, 22 years after the initial interviews, when the subjects were 30–31 years of age, ego development was assessed using Holt's (1980) 12-item short form of the Washington University Sentence Completion Test of Ego Development (Loevinger & Wessler, 1970). Scoring of the sentence completion protocols was accomplished in the following manner. A typist transcribed the responses of the subjects onto separate sheets for each sentence stem in order to eliminate the raters' potential bias of judging responses from the previous items on the protocol. Two raters independently scored each response according to the scoring manuals (Holt, personal communication, 1980; Loevinger, personal communication, 1981; Loevinger & Wessler, 1970) and reached consensus on the responses on which they disagreed. Each subject's protocol was then reassembled and given an item-sum score (a total of stage scores for all 12 stems) and a total protocol rating (the subject's modal stage of ego development) by use of ogive rules provided by Holt (personal communication, 1981).

Results

Interrater reliability of the sentence completion test.—Two raters independently scored each of the 12 sentence stems for 187 subjects (100 females, 87 males) in order to evaluate interrater reliability. Using the Pearson correlation coefficient, interrater reliability was .76 for the male stems and .79 for the female stems. Exact agreement between raters occurred on 76% of all male responses and 77% of all female responses. Exact agreement or agreement within one ego level in either direction occurred on 91% of both male and female responses. These results compare quite favorably with those reported by Loevinger and Wessler (1970).

Coefficient alpha was calculated separately for male and female items. The standard-item alpha for males was .78 and for

females .74, indicating reasonably good homogeneity among the 12 items administered to both sexes.

An item-sum rating (summing the stages assigned to each of the 12 items on a subject's protocol) was calculated for each subject. The mean item-sum rating for males ($N = 192$) was 67.94, $SD = 7.95$; for females ($N = 206$), the mean was 69.80, $SD = 7.75$. A t test indicated that females scored significantly higher than males, $t(396) = 2.36, p < .02$.

Ogive ratings were also calculated for each subject's protocol. This rating takes into account the possibility of regression (i.e., functioning at a lower ego development stage), without penalizing the subject, and yields a rating reflecting the subject's general level of ego development across the 12 items. For purposes of comparing the subjects in this study to those in other investigations, Table 1 indicates the distribution of subjects falling into particular ego levels. However, in all of the analyses reported in this paper, the subject's item-sum rating of ego development is used.

Longitudinal correlates of ego development.—In order to examine the relations between family background (SES) variables, parent child-rearing variables, child behaviors at age 8 and 19, and ego development at age 30, correlations were computed. In view of the differences in ego level attainment between the sexes, correlations are presented for males and females separately.

The relations between parent variables and the child's attainment of ego development at age 30 are shown in Table 2. The family background variables indicative of socioeconomic status (father's occupational status and parents' level of education) are more influential in predicting a girl's later ego level attainment than a boy's. In addition, child-rearing variables such as rejection, authoritarian punishment, and lower levels of identification between child and parents negatively affect a girl's ego development, but

TABLE 1

DISTRIBUTION OF SUBJECTS ACCORDING TO STAGES OF ADULT EGO DEVELOPMENT

Stage of Ego Development	Females (N = 206)	Males (N = 192)
Pre-Conformist	22 (11%)	34 (18%)
Conformist	34 (16%)	38 (20%)
Self-Aware	78 (38%)	77 (40%)
> Self-Aware	72 (35%)	43 (22%)

TABLE 2

CORRELATIONS OF AGE 8 FAMILY BACKGROUND, CHILD-REARING, AND SUBJECT VARIABLES AND AGE 19 SUBJECT VARIABLES WITH AGE 30 EGO DEVELOPMENT

VARIABLE	AGE 30 EGO DEVELOPMENT		
	Overall	Females	Males
Age 8:			
Family background variables:			
Father's Occupational Status . . . . .	.21*	.29***	.10
Parents' Education . . . . .	.20**	.28***	.14 ⁺
No. of Children in Family	-.09	-.13 [†]	-.07
Child-rearing variables			
Authoritarian Punishment	-.23**	-.19*	-.26***
Rejection	-.18*	-.19*	-.10
Nurturance . . . . .	.01	.02	-.04
Identification with Parents . . . . .	.18*	.20*	.15 [†]
Subject variables:			
Aggression	-.17**	-.21**	-.16*
Prosocial Behavior . . . . .	.21**	.33***	.19**
Intelligence . . . . .	.24***	.24***	.30***
Age 19:			
Subject variables:			
Aggression	-.25***	-.06	-.32***
Prosocial Behavior . . . . .	.22**	.30***	.23**
Aspirations for Occupational Attainment . . . . .	.34***	.29***	.41***

NOTE.—Parents' Education, Father's Occupational Status, Identification with Parents, and Aspirations for Occupational Attainment were originally reverse coded; the signs of their correlations with age 30 ego development were reversed in this table for consistency with the labels.

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

only authoritarian punishment has a significant negative influence on a boy's ego development. Thus, age 8 family background and parent child-rearing variables are more strongly related to adult attainment of ego development for females than for males.

The correlations in Table 2 also indicate that behavioral and cognitive subject variables at age 8 (aggression and prosocial behavior, and intelligence) are related to ego development 22 years later, equally strongly for males and females. In addition, as one might expect, subject variables at age 19 (aggression and prosocial behavior, and aspirations for occupational attainment) are also strongly related to adult attainment of ego development.

Predicting adult ego development from early variables.—Hierarchical regression analyses were computed to examine the ability to enhance the prediction of adult ego development by combining various subsets of age 8 and age 19 variables. In addition to two family background variables (parents' education and father's occupational status), variables that were significantly correlated with

adult ego development for both males and females were included in the multiple regression equations. Regressions were computed separately for males and females in view of the differences noted in the correlational analyses.

The predictive ability of various age-8 variables was first assessed. Initially, family background (SES indicators) variables and child IQ were entered as the predictors of adult ego development. These results are shown in the first regression listed in Table 3. For males, adult level of ego development is marginally predictable from early IQ but is not predictable from SES indicators. For females, however, both IQ and SES significantly predict adult ego development. As the second regression in Table 3 shows, adding in child-rearing variables alone fails to enhance predictability above and beyond that of SES indicators and child IQ. However, the third regression indicates that knowledge of the child's behavioral style at age 8 significantly increases one's ability to predict adult ego level for both boys and girls. Of major interest here is that a boy's nonaggression—not proso-

TABLE 3

HIERARCHICAL MULTIPLE REGRESSIONS SHOWING THE EFFECTS OF AGE 8 BACKGROUND VARIABLES, CHILD-REARING VARIABLES, AND CHILD BEHAVIOR VARIABLES IN PREDICTING AGE 30 EGO DEVELOPMENT

PREDICTOR VARIABLES	STANDARDIZED REGRESSION COEFFICIENTS					
	Males			Females		
	Regression Predicting Ego Development from Background Variables	From Child-rearing Variables as Predictors	From Child Behavior Variables as Predictors	From Child-rearing Variables as Predictors	From Child Behavior Variables as Predictors	From Child-rearing and Child Behavior Variables as Predictors
Background variables:						
Parents' Education	.13			.01		
Father's Occupational Status	.02			.30*		
Child IQ—age 8	.22+			.22*		
Multiple R ²	.09			.13		
df	3,71			3,74		
F value	2.31+			3.55*		
Child-rearing variables:						
Identification with Parents		.02		.00		
Authoritarian Punishment		-.07		-.09		
Increment in R ² over background variables		.01		.01		
df		2,70		2,63		
F value		.20		.26		
Child behavior variables:						
Aggression		-.24*		-.00		
Prosocial Behavior		-.07		.40***		
Increment in R ² over background variables		.05		.16		
df		2,72		2,75		
F value		1.94		7.39***		
Child-rearing and child behavior variables:						
Identification with Parents		.04				.08
Authoritarian Punishment		-.06				-.05
Aggression		-.24+				-.03
Prosocial Behavior		-.08				.37**
Increment in R ² over background variables		.05				.15
df		4,68				4,61
F value		.97				2.61*

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

cial behavior—and a girl's prosocial behavior—not nonaggression—contribute to predicting adult ego development. These results suggest that the development of aggression in boys and prosocial behavior in girls is linked to adult attainment of ego development. The fourth regression in Table 3 indicates that adding in child-rearing variables does not further contribute to predicting a child's later ego development above and beyond that of the background variables and the child's behavioral style at age 8.

Next, the predictive ability of various subsets of age 19 variables was examined in a similar manner. Table 4 shows that, initially, age 30 ego development was predictable from the family background variables measured at age 8. The second regression shows that knowledge of the child's behavior and occupational aspirations at age 19 significantly enhances the predictability of ego development at age 30. Once again, for males, nonaggression contributes significantly to this prediction, while for females, prosocial behavior at age 19 is important for predicting adult ego level. These results confirm the earlier findings that the development of aggression and prosocial behavior differentially relate to adult ego development in males and females. It is important to note that the contribution of these age 19 variables is independent of the contribution of the family background variables.

Comparing Tables 3 and 4, one can see that age 19 nonaggression is a somewhat better predictor of age 30 ego development for males than was age 8 nonaggression. This is not surprising since shorter time lags generally yield more significant predictions. However, for females, surprisingly, age 19 prosocial behavior was no better a predictor of age 30 ego development than was age 8 prosocial behavior.

Discussion

Recently, research has begun to focus on variables assumed to influence an individual's ego development. A logical cluster of variables examined has been "family behavior" (Bell & Bell, 1982; Hauser et al., 1984; Powers et al., 1983). While previous authors have assessed ego development during adolescence and concurrent family functions (e.g., parental support), the present study represents an attempt to investigate longitudinally family and child variables associated with ego development 22 years later.

It was found that parent child-rearing practices characterized by the absence of re-

jection, a nonauthoritarian approach to punishment, and a high level of identification between the parent and child were associated with higher levels of adult ego development. These results confirm theoretically-based assumptions that social interaction factors present in the early home environment are related to adult ego level status. However, these relations between parent child-rearing practices and adult level of ego development obtained more strongly and consistently for females than for males. That home environment appears to be related to later ego development more strongly for females than males is also illustrated by significant relations between family SES indicators at age 8 and adult ego level attainment for females but not for males. It is possible that socialization differences between the sexes account for this finding. Researchers (Kagan & Moss, 1962) have reported that parents are more permissive toward boys than girls, and thus the influence of the family context may exert a different impact on girls and boys.

Unfortunately, since this study did not assess the subject's age 8 level of ego development, it cannot be concluded that the subject's ego development, relative to that of others in this sample, is stable over time. However, the findings that early aggression, prosocial behavior, and intelligence related to adult level of ego development lend some support to such a notion. These early behaviors are indicative of a child's impulse control, adjustment in interpersonal relationships (e.g., popularity), and cognitive ability.

The hierarchical regression analyses indicated that age 30 ego development could be predicted from various clusters of variables including age 8 family background variables and age 8 and 19 child variables. These analyses first indicated that adult ego development cannot simply be attributed to a child's socioeconomic background nor his or her IQ at age 8. Knowledge of a child's social behavior at ages 8 and 19 significantly enhanced the prediction of adult ego development above and beyond that already predicted by family SES and IQ. However, a surprising result was obtained. For males, age 8 or 19 nonaggression predicted age 30 ego development, but for females age 8 or 19 prosocial behavior predicted age 30 ego development. It is likely that society's differential acceptance and reinforcement of boys' and girls' social behavior accounts for this finding. Eron (1980) noted that, "Whereas most boys are probably encouraged and reinforced in the direct and overt expression of aggression, most girls are

TABLE 4

HIERARCHICAL MULTIPLE REGRESSIONS SHOWING THE EFFECTS OF AGE 8 BACKGROUND VARIABLES AND AGE 19 SUBJECT VARIABLES IN PREDICTING AGE 30 EGO DEVELOPMENT

PREDICTOR VARIABLES	STANDARDIZED REGRESSION COEFFICIENTS			
	Males		Females	
	Regression Predicting Ego Development from Background Variables	Regression Predicting Residuals of Ego Development/Background Variables from Age 19 Subject Behavior and Aspirations	Regression Predicting Ego Development from Background Variables	Regression Predicting Residuals of Ego Development/Background Variables from Age 19 Subject Behavior and Aspirations
Background variables:				
Parents' Education .....	.13		.01	
Father's Occupational Status .....	.02		.30*	
Child IQ—age 8 .....	.22 ⁺		.22*	
Multiple <i>R</i> ² .....	.09		.13	
<i>df</i>	3.71		3.74	
<i>F</i> value	2.31 ⁺		3.55*	
Subject behavior and aspirations—age 19:				
Aggression		-.32**		-.00
Prosocial Behavior		-.09		.30*
Occupational Aspirations .....		.34**		.20 ⁺
Increment in <i>R</i> ² over background variables .....		.21		.17
<i>df</i>		3.71		3.74
<i>F</i> value		6.41***		5.03***

⁺ *p* < .10.
^{*} *p* < .05.
^{**} *p* < .01.
^{***} *p* < .001.

not. Very early in life, girls learn that physical aggression is an undesirable behavior for girls, and so they acquire other behaviors more suitable to expectations for girls" (p. 247). Indeed, several investigators have found that boys are generally more aggressive than girls (Eron et al., 1971; Lefkowitz et al., 1977; Maccoby & Jacklin, 1974).

As Eron (1980) has suggested, society might well expect girls to develop behaviors other than aggression. Perhaps girls are expected to exhibit more prosocial behavior than boys, and are likely rewarded for it. Thus, a girl comes to learn that prosocial behaviors will help her achieve her goals, develop interpersonal relations, and perhaps enhance her cognitive development through success in school. Girls might learn this early in life. Indeed, the relation between age 8 prosocial behavior and age 30 ego development is just as strong as that between age 19 prosocial behavior and age 30 ego development, despite the difference in time lags.

For boys, however, society appears to attend to aggressive behavior, viewing prosocial behavior as more "feminine" and perhaps "sissy-like" for boys. A certain degree of aggressive behavior in boys may be viewed as "assertive" or "masculine." Such behavior is probably conducive to a boy's social success, in terms of popularity and leadership roles with peers. However, high levels of aggression in boys are not tolerated, are likely to result in punishment, and appear to contribute to academic failure (Huesmann et al., in press). Thus for boys, learning to control aggression and use it appropriately as is expected for his sex might be a difficult cognitive task.

It must be stressed that a limitation of this study is that we cannot conclude that early aggression, prosocial behavior, or intelligence causes later ego development. Indeed, it could be that high levels of early ego development influenced early social behavior. However, knowing that early aggression and prosocial behavior help us predict later ego level status could potentially be helpful for developing early intervention programs to enhance later ego development.

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