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The Relation of Parenting Style to Adolescent School Performance

Sanford M. Dornbusch, Philip L. Ritter, P. Herbert Leiderman, Donald F. Roberts, and Michael J. Fraleigh

Stanford Center for the Study of Youth Development

DORNBUSCH, SANFORD M.; RITTER, PHILIP L., LEIDERMAN, P. HERBERT; ROBERTS, DONALD F.; and FRALEIGH, MICHAEL J. *The Relation of Parenting Style to Adolescent School Performance*. CHILD DEVELOPMENT, 1987, 58, 1244–1257. This article develops and tests a reformation of Baumrind's typology of authoritarian, permissive, and authoritative parenting styles in the context of adolescent school performance. Using a large and diverse sample of San Francisco Bay Area high school students ($N = 7,836$), we found that both authoritarian and permissive parenting styles were negatively associated with grades, and authoritative parenting was positively associated with grades. Parenting styles generally showed the expected relation to grades across gender, age, parental education, ethnic, and family structure categories. Authoritarian parenting tended to have a stronger association with grades than did the other 2 parenting styles, except among Hispanic males. The full typology best predicted grades among white students. Pure authoritative families (high on authoritative but not high on the other 2 indices) had the highest mean grades, while inconsistent families that combine authoritarian parenting with other parenting styles had the lowest grades.

A recent review of research on the family and school as educational institutions notes an increasing emphasis on "process" studies that seek to identify those features of the family environment through which socioeconomic and cultural background have an impact on mental development and school achievement. Hess and Holloway (1984) analyzed results from studies of preschool, primary, and middle-school children and identified five processes linking family and school achievement: (1) verbal interaction between mother and children, (2) expectation of parents for achievement, (3) positive affective relationships between parents and children, (4) parental beliefs and attributions about the child, and (5) discipline and control strategies. Among these various processes, discipline and control strategies appeared to have a major influence on school achievement (Baumrind, 1973; Hess & McDevitt, 1984; Marjoriebanks, 1979).

The research of Baumrind is particularly pertinent because she attempts to link components of family interaction to cognitive competence. She postulates three family parenting styles (authoritative, authoritarian, and permissive) that have consequences for the development of cognitive and social competence. These three family types differ in the values, behaviors, and standards that children are expected to adopt; in the ways these values, behaviors, and standards are transmitted; and in parental expectations about the behavior of children. In this study we extend Baumrind's typology to a large and ethnically diverse sample of adolescents.

Baumrind, in a series of studies of preschool children and their families (Baumrind & Black, 1967), and later in studies of somewhat older children, delineated three modes of family interaction that we will reformulate for use in this study of adolescents and their

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parents. (We will not describe the harmonious and nonconforming patterns, which we do not use.)

The authoritarian style of parenting had the following characteristics: parents attempted to shape, control, and evaluate the behavior and attitudes of their children in accordance with an absolute set of standards; parents emphasize obedience, respect for authority, work, tradition, and the preservation of order; verbal give-and-take between parent and child is discouraged. Baumrind's study of preschool children found that such a mode of family interaction was associated with low levels of independence and social responsibility.

Baumrind later described the authoritarian pattern, somewhat more formally, as being high in demandedness on the part of the parents and low in parental responsiveness to the child. She continued her studies of children, this time with children 8–9 years old (Baumrind, 1971, 1973). She found that the authoritarian pattern, high in demandedness and low in parental responsiveness, had different consequences for girls and for boys. Girls, but not boys, who came from authoritarian families were more socially assertive. For both sexes, intrusive-directiveness was associated with lower cognitive competence (Baumrind, in preparation).

A second pattern is permissive parenting, in which parents are tolerant and accepting toward the child's impulses, use as little punishment as possible, make few demands for mature behavior, and allow considerable self-regulation by the child. In the study of preschool children, Baumrind found the children of permissive parents were immature, lacked impulse control and self-reliance, and evidenced a lack of social responsibility and independence. In the follow-up studies at 8–9 years of age, these children were low in both social and cognitive competence.

Authoritative parenting is the third type described by Baumrind. This pattern contains the following elements: an expectation of mature behavior from the child and clear setting of standards by the parents; firm enforcement of rules and standards, using commands and sanctions when necessary; encouragement of the child's independence and individuality; open communication between parents and children, with encouragement of verbal give-and-take; and recognition of the rights of both parents and children.

Female children of authoritative parents in the preschool sample were socially respon-

sible and more independent than other children. Male children were as independent as the other children were, and they appeared to be socially responsible. At ages 8 and 9, both male and female offspring of authoritative parents were high in social and cognitive competence (Baumrind, in preparation).

The studies of Baumrind and others have focused on preschool children and children in elementary school. Studies of family processes and school achievement beyond childhood are rare. A recent study showed that the effect of parental control processes persisted in school performance among children 12 years of age (Hess & McDevitt, 1984). In addition, there is suggestive evidence that high achievement in the adolescent years is associated with at least one family process, high identification with parents (Kandel & Lesser, 1969; Morrow & Wilson, 1961; Rickberg & Westby, 1967; Shaw & White, 1965; Swift, 1967; Weinhert & Trieber, 1982).

This article develops and tests Baumrind's conceptualization of family processes in the context of adolescent school performance. The study is unusual in that it extends Baumrind's typology of authoritative, authoritarian, and permissive parenting to a very large and diverse sample of adolescents, using high school grades as the criterion variable. A large-scale questionnaire study of adolescents in high schools was used to derive indirect measures of the style of parenting. In assigning scores on the three parenting styles, we relied on the face validity of questions and response categories. The reliability of two of our three measures and the consistency of our findings increase our confidence in the utility of this approach.

Sources of Data

The major source of data for this study is a questionnaire completed by 7,836 adolescents enrolled in six high schools in the San Francisco Bay area, approximately 88% of the total enrollment of those schools, in Spring 1985. The questionnaire contained numerous items. Those used in this article include student background characteristics, self-reported grades, perceptions of parental attitudes and behaviors, and family communication patterns. From this questionnaire we used perceptions of family processes to construct indices of parenting style, background variables to serve as controls, and self-reported grades as the dependent variable.

Some questionnaire items were not answered by all students. Small variations in

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sample size across tables reflect this fact. We chose to present all the available data rather than including only those cases where the data were complete.

The data from that questionnaire are augmented by information on parental education from two additional sources. First, a student questionnaire had been administered in Spring 1983 to a sample of students at five of the six participating schools. The students who participated in both surveys gave us a substantial pool of students for whom we had parental education. Second, parental responses to a family questionnaire mailed to the homes of all students in our sample provided information on parental education for additional cases in our sample. For those analyses, such as multiple regressions, which required the inclusion of parental education as a measure of social stratification, a substantial portion of our cases had to be excluded because of the absence of information on parental education.

For one school in our sample we had current grade point averages for every student. Those data enabled us to assess the validity of the self-reported grades that we used as a dependent variable.

Measures

Demographic Variables

Ethnicity.—Each high school student was asked to select one of nine categories for ethnic identification: Asian, black, Filipino, Pacific Islander, American Indian, Latino or Hispanic, white, and other. Vietnamese respondents were combined with the Asian subgroup. Sample sizes provide sufficient cases for the analysis in this article of responses from four groups: Asian, black, Hispanic, and (non-Hispanic) white.

Parental education.—Our measure of parental status or social class was parental education. There was no information on parental education in the student questionnaire used as the basis for most of this article. Two other sources, responses to a questionnaire mailed to parents and responses to a previous student questionnaire, were used to determine parental education for a subset of the total sample. Together, these two additional sources provided information on parental education for 4,053 cases, or 52% of the total sample.

The parental education categories used in the previous student questionnaire were: (1) not a high school graduate; (2) high school graduate; (3) vocational, trade, or business school; (4) some college; (5) 4-year college de-

gree; (6) graduate or professional degree; and (7) don't know. The question that was used in the parent survey had slightly finer gradations, and was recoded to match the breakdown shown here. Mother's education and father's education were then averaged to create a single parental education measure for each family. Finally, for qualitative analyses, mean parental education was trichotomized so as to produce categories of clear social meaning: up to 3.5 = low education, 4 to 4.5 = middle education, and 5 and above = high education. Families whose mean education did not reach attendance at a college were in the low-education group; the middle-education group included college attendance but not receiving a 4-year degree; the high group had at least a 4-year college degree.

Family structure.—Our measure of family structure came from student reports of who is present in the household. In the analyses presented here, family structure consists of five categories: two natural parents, single mother, mother and stepfather, single father, and father and stepmother. All other family forms were too infrequent to provide a sample large enough for analysis.

Measures of Parenting Style

Three parenting style indices were developed to roughly conform with Baumrind's three styles of parenting (authoritarian, permissive, and authoritative). Twenty-five items or sets of items were identified in the student questionnaire as closely reflecting one of the three styles, and each index was constructed by taking the means of the appropriate items. No question was allowed to contribute to more than one of the indices, so that the three scores are not forced to be correlated with each other.

The authoritarian index was based on the mean response to the following eight questions concerning the frequency of certain family behaviors: in their family communication, the parents tell the youth not to argue with adults, that he or she will know better when grown up, and that the parents are correct and should not be questioned; as a response to poor grades, the parents get upset, reduce the youth's allowance, or "ground" the youth; as a response to good grades, parents tell the youth to do even better, and note that other grades should be as good.

The permissive index was the mean of eight responses: hard work in school is not important to the parents (the mean for four academic subjects), the parents don't care if the student gets bad grades, they don't care if

the student gets good grades, there are no rules concerning watching television, and (using the highest involvement of the possible parent figures) the parents are not involved in education, they do not attend school programs for parents, they do not help with homework, and they do not check the child's homework.

The authoritative index was calculated from the mean frequency of nine responses concerning family behavior: in their family communication, parents tell the youth to look at both sides of issues, they admit that the youth sometimes knows more, they talk about politics within the family, and they emphasize that everyone should help with decisions in the family; as a response to good grades, parents praise the student, and give more freedom to make decisions; as a response to poor grades, they take away freedom, encourage the student to try harder, and offer to help.

These three indices of parental style were used as continuous variables throughout the article as the main measures for the three parenting styles.

The reliability of these three quantitative indices of parenting style was assessed using Cronbach's alpha. The alpha coefficients were .70 for the eight items of the authoritarian index, .60 for the eight items of the permissive index, and .66 for the nine items of the authoritative index. The alphas for the authoritarian and authoritative indices were moderately high and satisfactory, and the alpha for the permissive index was only slightly lower.

The slightly lower reliability for the index of permissive parenting may be a product of the limited nature of the indicators of permissiveness within our questionnaire. The concept of permissiveness may be tapping two distinct and identifiable parental attitudes. Permissiveness may refer to a parenting attitude that is essentially neglectful and uncaring, or it may refer to parenting that is caring and concerned but ideologically genuinely permissive. It is impossible to disentangle these differing orientations in our permissiveness scale. Ideally, researchers should construct scales and measure these two separable orientations. In the meantime, we urge caution in interpreting those portions of our results that feature indicators of permissiveness.

In addition to these quantitative measures, types of families were constructed based on the scores on the three indices. In particular, three "pure" styles of families

were defined, with a family included in a pure family style category if it scored in the top one-third on one parenting style index and not in the top one-third on either of the other two indices.

Half of the families (50%) could not be characterized as having a pure parenting style, while 18% (1,321) were categorized as pure permissive, 17% (1,218) were pure authoritative and 15% (1,064) were pure authoritarian. Thus, pure parenting styles apply to only half of the families in the total sample.

In addition, we created a variable in which every family was assigned to one of the possible combinations of pure parenting styles. These combinations range from being high on all three pure parenting styles to being high on none of them.

Measures of Student Performance

Self-reported grades.—The measure of student performance used throughout this article is the response by the student to a question that asks for the selection of a category that represents the usual grade the student receives. The categories were: mostly A's, about half A's and half B's, mostly B's, about half B's and half C's, mostly C's, about half C's and half D's, mostly D's, and mostly below D. A numerical scale of self-reported grades was then related to these responses, with 4.0 representing the top category.

We have consulted with educators about the use of grades as a measure of school performance. Their consensus was that grades, unlike scores on intelligence tests and measures based on standardized achievement tests, provide the most appropriate measure of current school performance. Grades have their difficulties as a measure of intellectual performance, for they often represent relatively arbitrary assessments by a teacher. But the typical grade, usual grade, or mean grade is the summation of many judgments about the extent to which a student is responding to the school curriculum.

Grade-point averages.—We found that grade-point averages were available in most of our schools only for seniors approaching graduation. One school had up-to-date grade-point averages for all its students. We therefore compared the questionnaire response, the self-reported grade, to the grade-point average for each student in that school.

The correlation between grade-point averages and self-reported grades was .76 ($N = 1,146$). We were concerned that there might be a systematic inflation of self-reported

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grades for students whose academic performance was low. Accordingly, we examined the responses of students at each grade level. There was only a slight tendency to overstate grades when one reached grades near the bottom of the distribution—mean grades of C and below.

Accordingly, throughout this article we will use a single measure of school performance that was available for almost all students in the sample. Self-reported grades give a close approximation to the distribution of grades on the transcript and will be used as the measure of school performance in all analyses.

Results

Parenting Style

In Table 1 we report the mean on each of the three parenting style indices by sex, age, ethnicity, parental education, and family structure. The extent to which different groups were reported by their children to employ each style of parenting is interesting in itself, in addition to its relation to high school grades. Since each index is based on a different set of questions, scores on one index should not be compared with scores on another. Rather, comparisons should focus on group differences in the means for a single index.

There were small sex differences in the parenting styles reported by the students. Females, compared to males, reported a slightly lower level of authoritarian parenting, a difference that was statistically significant. There was no gender difference in the reports of permissive parenting. These small gender differences in means will not be discussed further. Most of our analyses relating grades to parenting styles will not show gender differences in the results.

Family parenting style does appear to be related to the age of the adolescent. There was a decline in the mean score on the authoritarian index with increased age; permissiveness, on the other hand, was higher in the older age groups. The authoritative index did not show a clear relation to age. This suggests that, while there may be shifts in the level of authoritarian or permissive parenting as maturation takes place, the authoritative style may represent an ideological commitment that does not readily change as children grow up.

In Table 1, the mean on each parenting index for each ethnic-sex group is compared to the appropriate mean for whites. Differ-

ences among ethnic groups are seen in that analysis. Asian, black, and Hispanic families were higher on the authoritarian index for both sexes than were white families. Families of Asians, Hispanics, and black females were lower on the authoritative index than were white families. For permissiveness, the ethnic differences were more complex. Compared to whites, blacks were lower on permissiveness, Hispanics were higher, and Asians were slightly higher. Sixteen of the 18 differences were statistically significant.

The means on each parenting index in Table 1 also showed a clear relation to parental education. Comparing within each sex, families with higher parental education tended to be somewhat lower in authoritarian and permissive parenting and higher on authoritative parenting. These differences in parenting styles among parental education groups are interesting in themselves, even though the association of parenting styles with grades will be shown to apply across all parental education groups.

With respect to family structure, single mothers showed a higher level of permissive parenting than did two natural parents. For their sons only, single mothers showed lower levels of authoritarian parenting when compared to households containing both natural parents. Single fathers were also more permissive for both sexes, while they were less authoritarian for females and less authoritative for males than families containing both natural parents. Step-families, compared to families with two natural parents, tended to be more authoritarian and more permissive, and, for males only, less authoritative. Of the 24 comparisons between two-natural-parent families and other types of families, 12 were statistically significant.

Parenting Styles and Grades

For both sexes, the correlations between grades and the three indices of parenting style strongly support earlier studies on the cognitive impact of parenting styles. The negative correlation of authoritarian parenting to grades was $-.18$ for males and $-.23$ for females. For permissive parenting, the correlations were $-.09$ for males and $-.17$ for females. Finally, authoritative parenting had positive correlations with grades of $.08$ for males and $.13$ for females. All correlations were significant at the $.001$ level. The relation of authoritarian parenting to grades was the strongest of the three correlations for both sexes.

One question that could be asked about these relations of parenting styles to grades is whether they apply equally well within groups that differ on age, ethnicity, family structure, or education. Correlational analyses within categories provide a series of independent tests of the relation between parenting styles and grades. We will later present multiple regressions for the total sample and within ethnic groups, but here we will assess the consistency of these relations in specific categories of students.

The bulk of the literature on parenting styles is based on studies of young children. In that younger age group, the age of each child is more likely to be a central variable than in our studies of an adolescent population in high school. We did not expect that the relations between parenting style and grades would be highly dependent on the age of the student, but we tested the possibility by looking at the relation between parenting style and grades for males and females in each of the five largest age groups in our sample: 14, 15, 16, 17, and 18. There were no important fluctuations among age groups in the association between parenting style and grades. All 30 correlations (three scores by five ages and two sexes) were in the expected direction, and 29 were statistically significant.

The Baumrind typology was developed from the intensive analysis of parenting in largely middle-class, white families. We can take advantage of the size of our sample and its diversity to see whether, controlling for the sex of the child, the four main ethnic groups in our study show similar relations between each style of parenting and grades, and thus examine the extent to which a conceptualization developed in one cultural arena applies to groups with possibly divergent norms and values.

The data indicate that, across ethnic groups, authoritarian and permissive styles were associated with lower grades, and an authoritative style was associated with higher grades. All eight correlation coefficients for the two sexes and four ethnic groups were negative when the authoritarian parenting style was related to grades, and the same was true when the permissive parenting style was related to grades. For the authoritative style the correlation to grades was positive in seven out of eight ethnic-sex groups, with the only failure among Asian females. Thirteen of the 24 correlations were statistically significant at the .05 level.

There were, however, ethnic differences in the strength of the correlations between parenting styles and grades. For Asians, the correlations of grades with both the authoritative and the permissive styles were near zero. For Hispanic males, authoritarian parenting showed almost no relation to grades ($-.03$), even though the relation was strongly negative among Hispanic females ($-.26$). Among whites, our largest ethnic group, and blacks, our smallest, all correlations were as expected. Asians appear to be the ethnic group for whom our typology applies least well. Although our approach does not seem to be limited in application to only a single ethnic group, data from Asians appear to offer support only for the relation of authoritarian parenting to grades.

Although we have only a smaller sample of students for whom we know the education of their parents, it seems appropriate to use that information to see whether our parenting style indices relate to grades across social classes. There are low, middle, and high parental education families within each sex, making six independent subgroups within which to examine the relation of the three parenting styles to grades. All 18 correlations were in the expected direction, with 11 statistically significant. All correlations of authoritarian parenting with grades were statistically significant. The data support the view that the parenting style typology applies fairly well across the social classes.

We can simultaneously control for ethnicity and parental education and thereby produce numerous correlations of parenting style with grades, although many were based on a small number of cases. There are four ethnic groups, three parental education groups, two sexes, and three styles of parenting. Excluding groups with fewer than 10 students, there were 63 remaining correlation coefficients to examine. Of the 63, 48 were in the expected direction (positive for the authoritative index and negative for the authoritarian and permissive indices) and 15 in the opposite direction, a ratio better than three to one. Looking only at correlations that were statistically significant, 21 were in the predicted direction and only one (authoritative parenting for sons of low-education Asians) was in the opposite direction. These correlations supported the hypothesized relations between each parenting style and grades.

As American society has exhibited a decline in the proportion of children living with both natural parents, we wish to see if our reformulation of Baumrind is applicable to

TABLE 1
 MEAN ON EACH PARENTING STYLE INDEX, BY SEX, AGE, ETHNICITY, PARENTAL EDUCATION, AND FAMILY STRUCTURE

	MALE			FEMALE				
	Authoritarian	Permissive	Authoritative	N	Authoritarian	Permissive	Authoritative	N
Total	3.41 (.64)	2.95 (.62)	3.55 (.60)	4,047	3.34*** (.61)	2.96 (.57)	3.56 (.55)	3,789
Age:								
14	3.43 (.64)	2.75 (.57)	3.63 (.59)	455	3.38 (.60)	2.82 (.54)	3.54 (.57)	550
15	3.41 (.63)	2.87 (.62)	3.54 (.61)	1,032	3.38 (.60)	2.87 (.57)	3.57 (.55)	1,069
16	3.47 (.63)	2.94 (.59)	3.55 (.57)	1,085	3.38 (.60)	2.98 (.55)	3.55 (.55)	974
17	3.35 (.63)	3.07 (.61)	3.56 (.61)	896	3.27 (.60)	3.08 (.55)	3.59 (.54)	758
18	3.35 (.66)	3.14 (.63)	3.49 (.62)	461	3.21 (.62)	3.12 (.58)	3.56 (.55)	347
Ethnicity:								
White	3.33 (.61)	2.95 (.57)	3.58 (.58)	2,314	3.25 (.59)	2.94 (.53)	3.61 (.52)	2,239
Asian	3.52*** (.63)	3.02* (.63)	3.45*** (.63)	418	3.45*** (.58)	2.97 (.58)	3.51*** (.53)	382
Black	3.65*** (.70)	2.70*** (.70)	3.62 (.68)	230	3.54*** (.59)	2.84* (.59)	3.51* (.64)	196
Hispanic	3.55*** (.65)	3.02* (.71)	3.49** (.63)	549	3.47*** (.63)	3.08*** (.63)	3.46*** (.60)	525

Parental education:									
Low	3.43*** (.64)	3.01*** (.60)	3.49*** (.58)	715	3.35*** (.60)	3.03*** (.55)	3.48*** (.54)	679	
Middle	3.33 (.58)	2.85 (.55)	3.63* (.56)	947	3.25+ (.58)	2.87 (.51)	3.65** (.50)	939	
High	3.31 (.56)	2.84 (.51)	3.71 (.49)	353	3.18 (.56)	2.83 (.49)	3.73 (.46)	325	
Family structure:									
Two natural parents	3.41 (.62)	2.92 (.59)	3.58 (.60)	2,432	3.33 (.59)	2.92 (.54)	3.58 (.53)	2,241	
Single mother	3.33** (.63)	3.06*** (.61)	3.54 (.58)	635	3.33 (.60)	3.03*** (.58)	3.54 (.58)	716	
Mother and stepfather ...	3.48+ (.64)	2.99+ (.61)	3.54 (.61)	321	3.40* (.60)	3.02*** (.52)	3.56 (.56)	367	
Single father	3.39 (.64)	3.06** (.62)	3.47* (.61)	158	3.08*** (.69)	3.09** (.63)	3.58 (.62)	101	
Father and stepmother ...	3.63*** (.66)	3.01 (.65)	3.47* (.64)	158	3.44+ (.65)	3.07** (.59)	3.56 (.57)	114	

NOTE.—Numbers in parentheses are standard deviations. Within the Total row, tests of significance compare the mean on each index for females with the mean on the same index for males. Within the analysis for Ethnicity, tests of significance compare the mean on each index for a sex within an ethnic group with the mean on the same index for the same sex among whites. Within the analysis for Parental education, tests of significance compare the mean on each index for a sex within either the low or middle parental education group with the mean on the same index for the same sex within the high parental education group. Within the analysis for Family structure, tests of significance compare the mean on each index for a sex within each of the single-parent or stepparent groups with the mean on the same index for the same sex within families containing two natural parents.

+ $p < .10$, two-tailed.
* $p < .05$, two-tailed.
** $p < .01$, two-tailed.
*** $p < .001$, two-tailed.

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children living in other types of families. For five types of family structure, the three parenting styles were related to grades for both sexes. Of those 30 correlations, only two failed to be in the hypothesized direction. The two failures occurred in the least common family structure—the child living with a male single parent—where sampling fluctuation is greatest. Within the more frequent family structures—two natural parents, a single mother, or a mother and stepfather in the household—15 of the 18 correlations were statistically significant at the .05 level using a two-tail test. Since all 17 statistically significant correlations were in the predicted direction, the evidence suggests that diverse

family structures do not limit the scope of application of parenting styles.

Multiple Regressions

Table 2 contains two multiple regressions in which a series of structural variables are combined, in the first regression, with the indices of parenting style, or, in the second regression, with a set of measures of pure parenting style (in the top one-third on one parenting style index and not in the top one-third on either of the other two indices) in order to predict grades. In a separate article we will show that family processes, of which parenting style is just one element, are more powerful than structural variables in the ex-

TABLE 2

DETERMINANTS OF GRADES, USING STRUCTURAL VARIABLES AND EITHER PARENTING STYLE INDICES OR PURE PARENTING STYLES

	WITH PARENTING STYLE INDICES			WITH PURE PARENTING STYLES		
	<i>b</i>	Beta	<i>F</i>	<i>b</i>	Beta	<i>F</i>
Female .....	.084*** (.023)	.054	13.2***	.093*** (.024)	.060	15.8***
Parental education ....	.117*** (.011)	.171	112.2***	.125*** (.011)	.183	126.9***
Black	-.188** (.063)	-.045	8.9**	-.205** (.064)	-.049	10.3**
Hispanic	-.117* (.047)	-.040	6.4*	-.122** (.047)	-.042	6.7**
Asian .....	.485*** (.039)	.186	151.6***	.466*** (.040)	.179	137.4***
Age	-.023* (.010)	-.037	5.9*	-.023* (.010)	-.036	5.6*
Single parent	-.213*** (.031)	-.107	48.6***	-.200*** (.031)	-.100	42.3***
Stepparent	-.163*** (.039)	-.064	17.6***	-.175*** (.039)	-.068	19.8***
Authoritarian	-.303*** (.020)	-.230	227.7***	...	...	...
Permissive	-.127*** (.025)	-.088	26.9***	...	...	...
Authoritative .....	.053* (.024)	.037	5.0*	...	...	...
Pure Authoritarian ....	...	...	...	-.295*** (.025)	-.177	134.2***
Pure Permissive .....	...	...	...	-.143*** (.027)	-.083	27.0***
Pure Authoritative ....	...	...	...	.045 ⁺ (.025)	.027	3.2 ⁺
Constant	3.941	...	...	2.825	...	...
<i>R</i> ² .....	.176	...	...	.156	...	...
<i>N</i>	3,752	...	...	3,752	...	...

NOTE.—Numbers in parentheses are standard errors.

⁺ *p* < .10, two-tailed.

* *p* < .05, two-tailed.

** *p* < .01, two-tailed.

*** *p* < .001, two-tailed.

planation of variability in grades. Indeed, the proportion of variance explained in that analysis was surprisingly high, .34 to .38, given that no measure of intellectual performance or previous school performance was used as a predictor.

In Table 2, the only family processes used as predictors are those related to our measures of parenting styles, so that we are not expecting to explain a high proportion of the variance in grades. The utility of the multiple regression technique is that it permits the simultaneous operation and statistical control of all the structural variables we have used in the preceding analyses, and that it enables us to assess the relative strength of the relation between grades and each of the three parenting styles when the structural variables are all taken into account.

The first finding we note in Table 2 is that the proportion of the variance in grades explained by the predictors was slightly lower when the pure parenting styles were substituted for the scores on the parenting style indices. One explanation of this result will be discussed in our presentation of Table 4.

The standardized beta weights provide a means for assessing the relative contribution of each of the predictor variables. Focusing first on the structural variables, we note that the most powerful ethnic predictor in both equations was Asian. This gives further support to our conclusion that the parenting styles we have studied do little to explain the high grades of the Asians in our sample.

Parental education was also a relatively powerful predictor, with betas averaging approximately .18. Other relatively powerful structural predictors were our two measures of family structure. Being in a single-parent household or in a household containing a step-parent was negatively associated with grades. (A separate article will examine the processes within those family structures that produced these results.) In addition, female students tended to get higher grades than males, and black, Hispanic, and older students tended to get lower grades.

Turning to the parenting style indices in the first regression, we note once again the relatively stronger relation of the authoritarian index to grades, with a beta weight higher than the betas for the permissive and authoritative indices. Moreover, that the authoritarian index is stronger than parental education as a predictor indicates that this process variable was a better predictor than the usual measure of social status.

Using measures of pure parenting style produced similar results in the second equation. Pure authoritarian parenting showed a stronger relation to grades than either of the other two parenting types. In this equation, pure authoritarian parenting was approximately equal to parental education in strength as a predictor of grades. The relations between the pure parenting variables and grades were in the expected directions.

We also examined ethnic differences in the impact of parenting styles. Table 3 presents multiple regressions within each ethnic group, using the same structural variables and parenting indices that were used in the first equation of Table 2. (We also did regressions within each of the three most frequent family structures. We do not present the tables of results, but the findings show the same pattern in each family structure, with authoritarian and permissive parenting negatively associated with grades, and with authoritative parenting positively associated with grades.)

Within the Asian group, authoritarian parenting was the strongest predictor of grades, but the other parenting indices were not significantly related to grades. Within blacks, the group with the smallest number of cases, no parenting index was significantly associated with grades.

Among Hispanics, an interesting result emerged. Being female was significantly associated with high grades. Yet the interaction of females and authoritarian parenting was associated with low grades, significant if a one-tail test was used, and with the same magnitude of beta weight as being female. This interaction of gender and authoritarian parenting reversed the relation of authoritarian parenting itself to grades within the Hispanic sample. The failure of authoritarian parenting to affect Hispanic males was noted earlier. This may partially explain why, among Hispanics, females were only slightly higher than males in mean grades, while the difference was much more substantial in the other ethnic groups.

We can speculate on the reasons that authoritarian parenting is gender-specific in its impact on Hispanics. Perhaps this reflects cultural orientations that produce major gender differences within the Hispanic population. For example, Hispanic informants suggest that disobedience is expected among male children in authoritarian households but not expected from females. Males see themselves as future heads of households; their subordination is only temporary. Others suggest the importance of considering the lifelong orien-

TABLE 3

DETERMINANTS OF GRADES, USING STRUCTURAL VARIABLES AND PARENTING STYLE WITHIN ETHNIC GROUPS

	<i>b</i>	Beta	<i>F</i>
Asians:^a			
Female . . . . .	.001 (.069)	.001	.0
Parental education . . . . .	.086** (.031)	.139	7.7**
Age	-.070* (.028)	-.129	6.3*
Single parent	-.269* (.107)	-.125	6.4*
Stepparent	-.654*** (.173)	-.186	14.3***
Authoritarian	-.228*** (.060)	-.190	14.6***
Permissive	-.073 (.074)	-.057	1.0
Authoritative	-.089 (.073)	-.070	1.5
Blacks:^b			
Female . . . . .	.354** (.115)	.266	9.5**
Parental education . . . . .	.076 (.054)	.128	1.9
Age . . . . .	.017 (.053)	.029	.1
Single parent	-.019 (.123)	-.013	.0
Stepparent . . . . .	.131 (.180)	.065	.5
Authoritarian	-.142 (.095)	-.127	2.2
Permissive . . . . .	.076 (.109)	.064	.5
Authoritative	-.001 (.097)	-.001	.0
Hispanics:^c			
Female	1.070* (.544)	.662	3.87*
Parental education . . . . .	.037 (.038)	.059	.95
Age	-.007 (.038)	-.010	.03
Single parent	-.167 (.116)	-.085	2.06
Stepparent	-.209 (.159)	-.078	1.73
Authoritarian . . . . .	.117 (.240)	.088	.24
Permissive	-.048 (.085)	-.039	.33
Authoritative . . . . .	.170 ⁺ (.095)	.125	3.19 ⁺
Authoritarian × female	-.280 ⁺ (.155)	-.666	3.28 ⁺

TABLE 3 (Continued)

	<i>b</i>	Beta	<i>F</i>
Whites:^d			
Female . . . . .	.080** (.028)	.053	8.5**
Parental education . . . . .	.140*** (.014)	.188	103.0***
Age	-.025* (.011)	-.041	4.7*
Single parent	-.240*** (.036)	-.123	44.0***
Stepparent	-.138** (.044)	-.058	9.7**
Authoritarian	-.344*** (.024)	-.262	200.7***
Permissive	-.142*** (.030)	-.096	22.2***
Authoritative . . . . .	.073* (.029)	.050	6.4*

^a Intercept = 5.534; *N* = 370; *R*² = .141.
^b Intercept = 1.777; *N* = 135; *R*² = .121.
^c Intercept = 1.624; *N* = 285; *R*² = .082.
^d Intercept = 3.993; *N* = 2,592; *R*² = .157.
⁺ *p* < .10, two-tailed.
^{*} *p* < .05, two-tailed.
^{**} *p* < .01, two-tailed.
^{***} *p* < .001, two-tailed.

tations of Hispanic females, emphasizing femininity and family. Whatever the explanation, we have here clear additional evidence of difficulty in directly applying the parenting typology across diverse cultures.

Finally, looking at the results for whites in Table 3, we note how well the pattern of findings reflects the original formulation. Authoritarian and permissive parenting are associated with low grades, and authoritative parenting is associated with high grades. The typology derived from a predominantly white sample of children obviously continues to fit the white adolescent population fairly well.

Pure and Inconsistent Parenting Styles

All families in our sample can be categorized as either predominantly practicing one form of parenting or practicing a combination of parenting styles. The data in Table 4 include the mean grades of students from the families that could be categorized as pure authoritarian, pure permissive, and pure authoritative. We find that, for both sexes, the mean grades of the children from pure authoritative families were much higher than the mean grades of children from pure authoritarian or pure permissive families (all differences significant at the .001 level).

Looking at the same three pure family parenting styles, we examined mean grades

TABLE 4

MEAN GRADE OF EACH COMBINATION OF HIGH ON PARENTING STYLE INDICES, BY SEX

INDICES ON WHICH HOUSEHOLD IS HIGH	MALE		FEMALE		TOTAL	
	Mean Grade	N	Mean Grade	N	Mean Grade	N
All indices high	2.34 (.73)	92	2.42 (.79)	54	2.37 (.75)	146
Authoritarian and permissive	2.42 (.82)	349	2.49 (.83)	328	2.45 (.83)	677
Authoritarian and authoritative ...	2.54 (.77)	444	2.65 (.77)	303	2.58 (.77)	747
Permissive and authoritative	2.84 (.76)	129	2.94 (.69)	133	2.89 (.72)	262
Authoritarian only (pure)	2.62 (.79)	555	2.68 (.79)	509	2.65 (.79)	1,064
Permissive only (pure)	2.61 (.90)	673	2.70 (.85)	648	2.66 (.87)	1,321
Authoritative only (pure)	2.96 (.77)	552	3.08 (.72)	666	3.02 (.75)	1,218
No index high	2.80 (.82)	917	3.00 (.74)	908	2.90 (.79)	1,825

within ethnic, parental education, and family structure categories. For both sexes, within the four ethnic groups, three parental education groups, and the three most common family structures, there were no exceptions to the ordering of mean grades for the pure forms. Pure authoritative families always had the highest mean grades.

Table 4 also includes, for the two sexes and the total sample, mean grades for students coming from families exhibiting each possible combination of high scores on the three parenting style indices. Our definition of a family with a pure parenting style was that the family be in the top one-third on one parenting style index and not be in the top one-third on the other two indices. In Table 4, every family is thus assigned to one of the following groups: high on all three indices; high on two indices (authoritarian and permissive, authoritarian and authoritative, or permissive and authoritative); high on only a single index (our pure authoritarian, pure permissive, and pure authoritative families); and not high on any index.

The mean grades in Table 4 exhibit a pattern that helps to explain the slightly lower predictive power of the equation using pure parenting styles in Table 2. The mean grades of students from pure authoritative families were clearly the highest. But the mean grades of students in pure authoritarian or pure permissive families were not the lowest. The lowest grades were found among students

whose family parenting style is inconsistent, especially with combinations that include authoritarian parenting. The combination of authoritarian, permissive, and authoritative parenting (all indices high) and the combination of authoritarian and permissive parenting were associated with the lowest mean grades. Authoritarian combined with authoritative parenting was also associated with low grades. Only the combination of authoritative and permissive parenting (not including authoritarian parenting) had mean grades higher than pure authoritarian or pure permissive.

Thus, inconsistency, when including a high index on authoritarian parenting, is associated with the lowest grades. We speculate that inconsistency in the home environment creates anxiety among children, and that anxiety reduces the relation between the student's effort in school and the grade received. We have examined some other data from our sample and note a slight tendency for inconsistent communications from parents to be associated with a lower correlation between hours of homework and grades.

Discussion

This article has provided evidence that Baumrind's typology of parenting styles, originally formulated to explain social and cognitive development among young children, can successfully be applied to adolescents and related to their academic performance in high school. Students from a wide range of back-

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grounds tended to get lower grades when their descriptions of family behavior indicated more authoritarian parenting, more permissive parenting, or less authoritative parenting. The association between grades and the index of authoritarian parenting was stronger than the association between grades and the indices of the other styles of parenting.

The measurement of parenting styles from data derived from the child's perceptions creates a potential problem. For example, if students who are more estranged from their parents do less well in school and also tend to assign negative authoritarian characteristics to their parents, that might explain some of our findings. But some of our results do not fit this explanation focused on bias in reporting. First, some combinations of parenting styles, such as a highly authoritarian style mixed with high levels of permissiveness, were associated with lower grades than a pure authoritarian style. That students reporting such mixed or inconsistent parenting styles did less well in school suggests that the reports are more than a reflection of attitudes toward parents. Second, families of different ethnic background or different parental education markedly diverged in their use of parenting styles. Yet, without any allowance for the values and norms of each group with respect to authoritarian parenting, it continued to be negatively associated with grades across diverse groups. Such results suggest that we are dealing with more than a global positive or negative perception of parents and their behavior. Nevertheless, a survey such as this one cannot answer objections to using such perceptual data. Observational data, preferably longitudinal, are needed to check on these results.

Even as we stress the applicability of this typology of parenting styles across a variety of social groups, there are numerous findings that call for further investigation. For example, the mean level of authoritarianism was about the same in families of Hispanic males and of Hispanic females, yet authoritarianism was much more associated with poor school performance among the Hispanic females.

Similarly, our data show clearly that the success of Asian children in our public schools cannot be adequately explained in terms of the parenting styles we have studied. Compared to whites, Asian high school students of both sexes reported that their families were higher on the index of authoritarian parenting and lower on the index of authoritative parenting. Yet, counter to the general association of such parenting patterns

to grades, the Asians as a group were receiving high grades in school. In addition, while authoritarian parenting was significantly associated with lower grades among Asians, there was no significant relation between grades and the other two parenting styles. This article concludes with more questions than answers in examining Asian parenting practices and school performance.

The typology of parenting styles that we have adapted was primarily devised for the study of middle-class white families and their children. Indeed, the parenting typology did tend to be more associated with grades among whites than among the other ethnic groups. Yet, with the exception already noted for Hispanic males, in all ethnic groups authoritarian parenting showed the expected relation to grades. Permissive and authoritative parenting were not as consistently related to grades across ethnic lines.

It is impressive that the diverse measures of parenting styles were associated with grades across a wide variety of social categories. The two sexes, the five age groups, the five types of family structure, and the three parental education groups all exhibited the same predicted pattern. The families that were high in authoritarian or permissive parenting tended to have students who did less well in high school, and the families that were high in authoritative parenting had children who got higher grades in school. There were major differences between the sexes, among the age groups, among the family structures, and among the parental education groups in the extent to which the different styles of parenting were employed. Yet, regardless of each group's mean scores on the parenting styles, the relation of each style to school performance exhibited the predicted pattern within each group.

There is a need for further investigations that will help increase our understanding of these parenting styles and their consequences. Certainly, longitudinal studies that can unscramble the causal pattern are crucial. To some extent, parental behavior is a product of school performance by children, and that relation probably is inflating our correlational analysis. In addition, determining which parent or step-parent is engaging in which type of parenting style may help us to delineate the meaning of various parenting behaviors. Finally, careful studies of the meanings of specific behaviors as interpreted by members of various social groups, particularly ethnic groups, could produce a major advance in our knowledge. Both better data and

better conceptualizations are needed to advance our knowledge of parent-adolescent relationships.

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