

How Marital Dissolution Affects Children: Variations by Age and Sex

Paul D. Allison and Frank F. Furstenberg, Jr.
Department of Sociology
University of Pennsylvania

This study estimated the effects of a marital dissolution on several measures of children's well-being at two points in time using a nationally representative sample of 1,197 children. On the basis of reports from parents, teachers, and the children themselves, the outcome measures tap aspects of problem behavior, psychological distress, and academic performance. Regression estimates suggest that marital dissolution has pervasive and long-lasting effects in all three areas. In magnitude, the effects are slightly smaller than sex differences but larger than those for many other demographic variables. There is no evidence that dissolution effects are larger for boys than for girls. In fact, those differences that are significant show larger effects for girls. There is, however, evidence that effects are larger for children who are very young at the time of the dissolution.

In a classic review of early research on marital dissolution, Herzog and Sudia (1973) attacked the simplistic notion that divorce was a unitary event that had a uniform effect on all children. Such an approach, they contended, typically yields inconsistent results, because critical conditions that mediate the effects of divorce are overlooked. The importance of identifying conditions that specify and mediate the effects of marital disruption on children is now well recognized. In recent years, a growing number of investigators have begun to identify potentially important family processes that may amplify or dampen the impact of divorce. The earliest and best known of these studies are the clinically rich longitudinal studies of Wallerstein and Kelly (1980) and the careful small-scale observational investigations of Hetherington and her colleagues (1978).

The results of these investigations have been widely circulated in both popular and professional literature (e.g., McCall & Stocking, 1980; Price & McKenry, 1988). Two findings in particular have received special attention: The effects of divorce are more severe for boys than for girls, and divorce is more traumatic for children who are younger at the time of separation. Since these pioneering studies first appeared, there have been several attempts to replicate and generalize their findings (Emery, 1988).

Recent reviews of divorce studies reveal considerable inconsistency with regard to the modulating effects of age and gender on the consequences of marital dissolution. In a comprehensive review of gender and divorce, Zaslow (1987) concluded that it is still unclear whether boys react more negatively to marital disruption. She suggested that boys and girls may exhibit different symptoms of distress, and that boys may respond more negatively to living with an opposite-sex parent. She also hy-

pothesized that girls may react more negatively than boys to remarriage of the mother (see also Chase-Lansdale & Hetherington, in press).

Similarly, in an extensive summary of the divorce literature, Emery (1988) argued that age effects may be less clear-cut or easily interpreted than has been previously supposed. Age of the child is frequently confounded with age at the time of separation, length of time since the separation, and even historical period. No study to date has attempted to disentangle these differing temporal dimensions, a task that requires a longitudinal design and a large sample of children exposed to marital dissolution.

Using longitudinal data from a nationally representative study, we reexamine age and gender effects, in the hope of clarifying the confusing state of empirical knowledge and of broadening our understanding of how characteristics of parents, children, and their changing family circumstances mediate the impact of marital disruption.

Method

Subjects

The subjects were participants in a nationwide probability sample of children in the United States in 1976. This "National Survey of Children" (NSC) has been previously described in detail in Furstenberg, Nord, Peterson, and Zill (1983) and only a brief summary will be given here. The sample was developed from a household enumeration that screened families with children in the designated age range of 7 to 11 years. Interviews were obtained for 2,279 children from 1,747 households, with a completion rate of 80%. Adjustments were made in the weighting of the data to correct for differential sample attrition by age, sex, race of child, and residential location so that the sample would resemble the distribution of children reported in census tabulations.

A second wave of interviews was conducted in 1981 with a subsample of the original respondents. Interviews were attempted for all children whose parents had divorced or separated by 1976, all children whose parents in the initial interview reported that they were experiencing high conflict, and a random subsample of children who were living in stable family situations. Sampling weights were constructed to take into account the differential probability of children being selected in order to adjust for their true proportion in the original sample. Over 82% of

This research was supported in part by a grant from the National Science Foundation (SES-84-21070). We are grateful for the critical comments of the anonymous readers and of our colleagues Jerry Jacobs, S. Philip Morgan, Kristin Moore, James Peterson, Samuel Preston, and Nicholas Zill.

Correspondence concerning this article should be addressed to Frank F. Furstenberg, Jr., Department of Sociology, University of Pennsylvania, 3718 Locust Walk, Philadelphia, Pennsylvania 19104-6299.

the designated sample were reinterviewed, yielding 1,377 children from 1,049 households. From this group, we excluded those children with a deceased parent as well as children born out of wedlock who had never lived with their biological father, leaving a total of 1,197 subjects.

Procedure

Personal interviews were conducted in the 1976 wave, whereas the 1981 interviews were by telephone. In both years, interviews were conducted with one or two children in each household, and with the adult who knew most about them (i.e., the mother in 95% of the cases). These interviews contained numerous questions about family background, parent-child relations, and the child's social and psychological adjustment. The typical parent interview lasted more than 1 hr, and the child interviews averaged about 45 min. After the interviews, a mail questionnaire inquiring about academic performance and classroom behavior was sent to one teacher for each child. The return rate from teachers was 75% in 1976 and 85% in 1981.

The second wave interviews were not a strict replication of the first wave. Many measures from the first interview had been tailored for very young children and simply were not appropriate for children in early adolescence. Other items were dropped because they were not sufficiently reliable or had not proven useful in the initial data analysis.

Measures

Drawing from the reports of parents, teachers, and children, we developed measures of children's well-being in three broad areas: problem behavior, psychological distress, and academic performance. Table 1 gives the names of the 10 measures of well-being in 1981 and the 9 measures in 1976. Actually, it would be more accurate to call these measures of "ill-being," because all are constructed so that higher scores represent less desirable states or behaviors.

With one exception, all the measures of "academic difficulty" are based on single items measured on a 5-point ordinal scale (treated as interval in the regression analyses). The exception is the 1981 teacher's report, which is an average of ratings of verbal ability, mathematical ability, and overall performance. The remaining measures are all multiple-item scales; the individual items and the estimated reliabilities of these scales are given in the Appendix.

The multiple-item scales were constructed by drawing on a large pool of items that had high face validity for measuring some aspect of children's well-being. For each type of informant (parent, teacher, or child) and each interview year, the correlation matrix for that subpool of items was subjected to the VARCLUS clustering procedure (SAS Institute, 1982) in order to obtain sets of items with high correlations within the set and low correlations with items in other sets. At this stage, some clusters were eliminated because the items did not hang together conceptually, and some items were eliminated from some clusters for the same reason. The resulting clusters were further refined by testing them for unidimensionality using LISREL V (Jöreskog & Sörbom, 1981). Again, some clusters and some items were eliminated at this stage. The final step was to dichotomize the responses for each item (Alwin, 1973), sum the items in each cluster, and divide the sum by the standard deviation of the resulting scale. As a consequence, all scales (including the single-item measures) have standard deviations of 1.0. It is worth emphasizing that neither the scales nor the items of which they are composed were chosen on the basis of their empirical association with marital dissolution.

An attempt was made to construct identical or similar scales in 1976 and 1981, but this effort was hampered by the limited overlap of questions asked in the 2 years. As a result, the only multiple-item scales that are closely replicated across years are the teachers' reports of "problem behavior" and the child's reports of "dissatisfaction." The single-item indicators of "academic difficulty" reported by parents and children are also virtually the same across years. The parent's reports of problem

behavior and the child's reports of distress have some overlap but cannot be considered replications.

Results

In all the analyses, we compare children from "intact" families with the 328 children who experienced a marital dissolution. Intact families are those in which the child was living with both biological parents (or both adopted parents if the adoption occurred in infancy) at the time of the interview. This includes children born out of wedlock who were living with both biological parents in 1981. A dissolution occurred if the child's biological or adopted parents separated or divorced prior to the date of the interview.

Note that the dissolution group includes children who, at the time of the interview, are living in "reconstituted" families with one natural parent and one stepparent. Although this classification differs from some previous research, we felt that it was desirable to include all children who had ever experienced the divorce or separation of their parents. To do otherwise would bias the dissolution group in such a way that recently disrupted families would be overrepresented. It would also obscure any effects of marital dissolution that persist despite remarriage. We shall, however, report some results regarding the differences between remarried and single parents.

Bivariate Comparisons

For each of the 19 measures of well-being, Column 1 of Table 1 shows a difference in means: the mean for children who had experienced a marital dissolution minus the mean for children from intact families. Thus, positive values indicate that children who experienced a marital dissolution were worse off than those who did not. These differences can be compared across different outcome measures because each measure has been scaled to have a standard deviation of 1.0. For example, the value .35 for the parent's report of delinquency indicates that the difference between the means for children from dissolved and intact families was .35 standard deviations on the delinquency scale. In computing the 1976 differences, the 83 children whose parents were separated or divorced after 1976 were classified as intact.

For the 1981 measures, marital dissolution is significantly associated with reduced well-being for all five of the scales that are based on parent's reports, for two of the four scales that are based on the child's reports, and for neither of the teacher scales. The pattern is quite similar for the 1976 measures, although the differences tend to be somewhat more pervasive. In particular, a marital dissolution is significantly related to all three teacher's reports in 1976.

Regression Analyses

The differences in means observed in Column 1 of Table 1 do not necessarily imply that divorce reduces well-being. Families in which a divorce occurs undoubtedly differ in many respects prior to the divorce from families that remain intact, and these prior differences may account for the later differences in the well-being of the children. To reduce the plausibility of such alternative hypotheses, we estimated linear regression equations that included several variables determined prior to

Table 1
Effects of Marital Dissolution and Other Variables on Children's Well-Being

Report	Bivariate effect of dissolution	Regression effects			Dissolution Effects × Sex	
		Dissolution	Sex	Mother's education	Girls	Boys
1981						
Parent						
Delinquency	.35**	.32**	.40**	-.06	.25**	.37**
Problem behavior	.24**	.23**	.30**	-.18**	.14	.31**
Distress	.14*	.14*	-.20**	-.22**	.14	.12
Academic difficulty	.24**	.19**	.23**	-.41**	.29**	.04
Teacher						
Problem behavior	.07	.03	.48**	-.06	.20 ^a	-.16 ^a
Academic difficulty	.09	.03	.20**	-.41**	-.02	.02
Child						
Delinquency	.03	.06	.40**	-.01	.12	.02
Dissatisfaction	.19**	.11	-.23**	.05	.27** ^a	-.04 ^a
Distress	.22**	.19**	-.24**	.07	.34** ^a	.05 ^a
Academic difficulty	.07	.04	.06	-.33**	.09	-.07
1976						
Parent						
Hyperactivity	.27**	.27**	.18**	-.20**	.15	.32**
Problem behavior	.33**	.33**	.24**	-.07	.25*	.31**
Academic difficulty	.20**	.16*	.26**	-.30**	.22*	.03
Teacher						
Problem behavior	.46**	.44**	.67**	-.03	.44**	.48**
Adjustment	.44**	.41**	.40**	-.19**	.41**	.37**
Academic difficulty	.25**	.20*	.31**	-.20**	.33**	.13
Child						
Dissatisfaction	.29**	.27**	-.14*	.06	.29**	.14
Distress	.30**	.32**	-.12*	.10	.46**	.18
Academic difficulty	.06	.09	.12	.03	.17	.10

Note. For each measure of well-being, the coefficients in Columns 2, 3, and 4 were estimated in the same regression. Similarly, the two coefficients in Columns 5 and 6 were estimated in the same regression, by including interaction terms between sex and marital dissolution. In addition to marital dissolution, the regressions included variables describing the child's age, race, sex, birth order, and region of residence, as well as the mother's education, religious preference, age at birth of the child, age at birth of first child, and foreign or U.S. birth. Significance levels are based on standard Ordinary Least Squares two-sided *t* tests.

^a The difference between these coefficients in Columns 5 and 6 is significant at the .05 level.

* *p* < .05. ** *p* < .01.

the occurrence of a dissolution: the child's age, race, sex, birth order and region of residence; the mother's education, religious preference, age at birth of the child, age at birth of first child, and foreign or U.S. birth. It would obviously be desirable to include many other variables describing the family prior to a dissolution, but we were severely limited by the fact that most of the dissolutions occurred prior to the first interview in 1976. Few questions were asked about the state of the families before those dissolutions occurred. We did not include household income in 1976, for example, because this is likely to be a *consequence* of prior divorce rather than a cause.

Coefficients for the dummy variable indicating a marital dissolution prior to the interview are shown in Column 2 of Table 1. These coefficients can be interpreted as *adjusted* differences in means of the dependent variables and, therefore, can be directly compared with the bivariate differences in Column 1. As these coefficients show, the controls for other variables do not substantially change the pattern observed for the bivariate relationships. Of the 14 coefficients that were significant in Column 1, only 1 (for child's report of dissatisfaction in 1981) becomes

nonsignificant in the regression analyses. In most cases, moreover, the magnitudes of the coefficients decline only slightly when other variables are introduced.

Many of the other variables included in the regressions had significant effects on one or more outcome measures, but space is insufficient to display all these coefficients. To get a better sense of the magnitude of the dissolution effects, however, we do report the coefficients for sex and mother's education, which were among the more potent explanatory variables. A positive coefficient for sex indicates that males scored higher than females; a negative coefficient for mother's education indicates that children whose mothers had some college education scored lower than those whose mothers did not go beyond high school. Sex differences in our measures of well-being are more pervasive than the differences by marital dissolution (only three coefficients are not statistically significant) and are usually somewhat larger in magnitude. In fact, the sex effects were frequently the strongest among all the variables in each equation. Unlike the marital dissolution coefficients, however, which are always positive, the male-female differences do not uniformly favor

one sex or the other. Males always do worse on the behavioral measures, whereas females do worse on the measures of dissatisfaction and psychological distress. Not surprisingly, the effects of mother's education tend to be somewhat stronger than the dissolution effects for those variables representing academic performance and somewhat weaker for the other outcome measures.

Variations by Current Marital Status and Sex

Many studies of the effects of divorce simply take a cross-section of households and compare children in two-parent households with those in single-parent households (Levitin, 1979). This is clearly inappropriate if one's interest is in the long-term effects of a marital dissolution, because children whose custodial parent has remarried are treated as though a dissolution never occurred. Nevertheless, to ensure comparability of our findings with previous results, we divided the children who had experienced a marital dissolution into two groups depending on whether the custodial parent was single or remarried at the time of the interview. In 1976, 46% of the children who had experienced a dissolution were living in reconstituted families. In 1981, the figure was 39%.

We then reestimated our regression equations using dummy variables representing contrasts between (a) children in one-parent families compared with those in intact families and (b) children in reconstituted families compared with those in intact families. The results (not shown) showed little tendency for the children living with single parents to be any better or worse off than those in stepfamilies. Only one significant difference appeared: In 1976, remarried parents reported less academic difficulty for their children than did those parents who had not remarried.

Now, we turn to a central question of this article: Are there differences between boys and girls in the consequences of a marital dissolution? In the last two columns of Table 1, we report separate regression coefficients for marital dissolution for boys and for girls. For girls, each coefficient is an adjusted difference in means between girls who experienced dissolution and girls who did not (and similarly for boys). The effects of other variables were held constant across the sexes. In contrast with many previous studies (Emery, 1988; Zaslow, 1987), our data provide virtually no support for the hypothesis that marital dissolution has a greater impact on boys. Of the 19 outcome measures, only 3 (all in 1981) showed significant differences between boys and girls in the effects of a marital dissolution: teacher's report of problem behavior, child's report of dissatisfaction, and child's report of distress. In all three cases, the effects of a dissolution were greater for girls than for boys. (Exactly the same pattern is found if the Dissolution \times Sex interaction is estimated without including other control variables.)

An examination of differences between sexes that were not statistically significant also indicates some tendency for girls to be more strongly affected than boys. These differences are especially pronounced in the areas of academic difficulty, distress, and dissatisfaction. On the other hand, the effects for boys tend to equal or exceed those for girls in the behavioral areas. Thus, those areas in which girls do worse than boys (independently of marital dissolution) are also the areas in which they experience

most of the effects of a marital dissolution (and similarly for boys).

In a comprehensive review of the literature on sex differences and divorce, Zaslow (1987) concluded that boys are more negatively affected when they are living with a mother who has not remarried, whereas girls are more negatively affected when they are living with their mother and a stepfather. To examine this possibility, we estimated regressions with interactions among sex, marital dissolution, and current marital status of the mother. Children currently living with a divorced or separated father were excluded from the analysis because the hypothesis did not directly concern them. Not one of the 19 regressions showed a three-way interaction that was significant at either the .05 or the .10 level. Thus, these data do not provide convincing evidence for Zaslow's hypothesis.

On the other hand, because three-way interactions are often difficult to detect even with relatively large samples, it is worth looking a little more closely at the detailed results in Table 2 to see if there are any prevailing trends. At the .05 level, there is only one significant difference between boys and girls: The effect of a dissolution on the parent's report of dissatisfaction was greater for girls than for boys among those children whose mothers remarried. If we relax our criterion to the .10 level of statistical significance, five more measures show significant differences between boys and girls in the remarried group. Four of these five are in the direction of girls doing worse than boys. In addition, for parent's report of problem behavior in 1981, dissolution seems to have a stronger effect for boys with single mothers than for girls with single mothers.

As an informal summary of the information in Table 2, we averaged each of the four columns. For remarried parents, the means were .09 for boys and .22 for girls. For single parents, the means were .21 for boys and .24 for girls. Hence, there is some indication that boys are more negatively affected when their mothers remain single than when they remarry. On the other hand, the average effects for girls are essentially the same under either marital condition, and girls are also more strongly affected than boys under either condition. In view of the weak statistical evidence, however, these conclusions must remain highly tentative.

Variation With Time

Many previous studies have reported that a marital dissolution has its most harmful effects when children are very young at the time of separation (Emery, 1988). Our data do tend to corroborate this result, although perhaps not as strongly as has been suggested by other investigators. In the first three columns of Table 3, we report separate regression coefficients for marital dissolution for three groups of children according to their age at the time of separation. (No results are reported for 11- to 16-year-olds in 1976, because there were fewer than 15 children in this age range in that year.)

Overall, there is a clear tendency for the strongest effects to be concentrated in the youngest age group and the weakest effects to be found in the oldest age group. In only one instance, however, does this decline with age attain statistical significance—teacher's report of problem behavior in 1981. There are also some important exceptions. The two measures of delinquency in 1981 show little evidence of a decline with age at

Table 2
*Effects of Marital Dissolution on Children's Well-Being by Current
 Marital Status and by Sex of the Child*

Report	Remarried		Single	
	Boys	Girls	Boys	Girls
1981				
Parent				
Delinquency	.45**	.25	.41**	.27*
Problem behavior	.22	.07	.41** a	.11 a
Distress	.17	.09	.15	.13
Academic difficulty	-.08 a	.30 a	.10	.23*
Teacher				
Problem behavior	-.10 a	.31 a	-.14	.15
Academic difficulty	-.04	.03	.05	.03
Child				
Delinquency	-.04	-.02	.10	.09
Dissatisfaction	-.09 b	.37* b	.01	.24*
Distress	.13	.28	.05	.32**
Academic difficulty	-.15	-.10	.00	.18
1976				
Parent				
Hyperactivity	.28 a	-.13 a	.34*	.29*
Problem behavior	.08	.24	.51**	.25*
Academic difficulty	-.13	.31 a	.18	.17
Teacher				
Problem behavior	.37*	.56**	.58**	.38**
Adjustment	.29	.42*	.44**	.41**
Academic difficulty	-.06	.16	.30	.43**
Child				
Dissatisfaction	.20	.40*	.10	.25
Distress	.13 a	.54** a	.23	.42**
Academic difficulty	-.01	.11	.19	.19

Note. For each measure of well-being, all four coefficients were estimated in a single regression that included interaction terms for sex and marital dissolution as well as variables describing the child's age, race, sex, birth order, and region of residence, as well as mother's education, religious preference, age at birth of the child, age at birth of first child, and foreign or U.S. birth.

a Difference between the two adjacent coefficients is statistically significant at the .10 level. b Difference between the two adjacent coefficients is statistically significant at the .05 level.

* p < .05. ** p < .01.

separation, and neither do the child's reports of distress in both 1976 and 1981. Nevertheless, the preponderance of the evidence is consistent with the prevailing professional opinion.

These results are, however, subject to several competing interpretations. Because the interviews occurred at the same time for all the children, whereas the marital dissolutions occurred over a wide range of years, there is necessarily a large negative correlation between age at separation and the length of time since separation. In fact, the partial correlation between these two variables, controlling for age at interview, is necessarily 1.0. Thus, a *decline* in the effects of dissolution with increasing age at separation is equivalent to an *increase* in the effects of dissolution with increasing time since the separation.

To demonstrate this point, the last three columns of Table 3 show what happens when the effects of a dissolution are broken down by length of time since the separation occurred. As expected, there is evidence of increasingly strong effects with increasing length of time since the separation, with four of the outcome measures showing significant differences across the three groupings. In 1981, the dissolution effects are almost com-

pletely confined to children whose parents separated at least 6 years prior to the interview. Children whose parents were separated for 5 years or less fare about as well as children in stable marriages. By contrast, their peers whose parents separated 6 to 10 years prior to the interview are doing substantially worse on many of the measures. On the other hand, there does not appear to be any general trend toward further deterioration beyond the 10-year point.

Thus, we have the surprising result that earlier events seem to be having a much stronger impact on children's well-being than more recent events. This is not so obviously the case for the 1976 interviews, however, where five of the coefficients for the most recently separated group are statistically significant. Although there appear to be changes over time for some of the coefficients, none of the differences is statistically significant. (No coefficients are reported for dissolutions occurring more than 10 years before the 1976 interview because of the small number of cases in this group.)

Obviously these two ways of looking at the data have very different theoretical interpretations. A decline in effects with

Table 3
Effects of Marital Dissolution on Children's Well-Being by Child's Age at the Time of Separation and by Number of Years Since Separation

Report	Age at separation (years)			Years since separation (years)		
	0-5	6-10	11-16	0-5	6-10	over 10
1981						
Parent						
Delinquency	.33**	.35*	.23*	.03	.38**	.42** ^a
Problem behavior	.25**	.26*	.11	.00	.29**	.31**
Distress	.23*	.14	-.05	-.17	.29**	.18 ^b
Academic difficulty	.26**	.10	.07	.08	.08	.32**
Teacher						
Problem behavior	.31**	-.23	-.24 ^b	-.13	-.08	.24** ^a
Academic difficulty	.00	-.16	.13	.01	.01	-.01
Child						
Delinquency	-.01	.02	.26*	.06	.20	-.05
Dissatisfaction	.15	.21	-.01	-.06	.32**	.05 ^a
Distress	.20*	.27*	.13	.20	.30**	.09
Academic difficulty	.00	-.03	.07	.06	.04	-.04
1976						
Parent						
Hyperactivity	.18*	.20		.23*	.24*	
Problem behavior	.29**	.24*		.19	.36**	
Academic difficulty	.21*	-.01		-.02	.27**	
Teacher						
Problem behavior	.50**	.13		.32**	.60**	
Adjustment	.36**	.20		.31**	.46**	
Academic difficulty	.18	.15		.26*	.20	
Child						
Dissatisfaction	.26**	.12		.15	.29**	
Distress	.27**	.47**		.39**	.25**	
Academic difficulty	.18	.05		.08	.19	

Note. Two regressions were estimated for each outcome measure, one for age at separation and one for years since separation. Other control variables included the child's age, race, sex, birth order, and region of residence, as well as the mother's education, religious preference, age at birth of the child, age at birth of first child, and foreign or U.S. birth. Each of the reported coefficients is a comparison with children in intact families. No coefficients are reported for children at 11 to 16 years or for those with over 10 years since separation of parents because of the small number of cases.

^a Differences among preceding three columns are significant at the .05 level. ^b Differences among preceding three columns are significant at the .01 level.

* $p < .05$. ** $p < .01$.

age at separation suggests that young children are especially vulnerable, either (a) because they are more dependent on their parents and, hence, are less protected by extrafamilial supports such as teachers or peers or (b) because they are in a more formative stage of development and are therefore less resilient when faced with a traumatic event. On the other hand, an increase in effects with time since separation suggests that marital dissolution is not an isolated event but only the beginning of a continuous exposure to a long-lasting adverse situation that produces cumulative effects on the child.

The availability of reports for two different years enables us to make some headway in distinguishing between these two rival hypotheses. Table 4 is a rearrangement of some of the coefficients in Table 3. In Table 4, we consider only those variables that are closely or approximately replicated across the two interview years. We eliminated children who experienced a separation after 1976. We divided the remaining children into two groups according to whether the separation occurred in the period 1972-1976 or 1967-1971. Within each group, we compared the effects of a marital dissolution on their reported well-being in 1976 and in 1981. If time since separation were a major

factor in increasing the effects of a dissolution, one would expect the coefficients to be substantially larger in 1981 than in 1976. In fact, however, no such tendency is visible. For the teacher's report, the effects are clearly greater in the earlier year. For the parent's report, the effects are approximately the same for each of the two interview years. For the child's report, the effects show a decline with time for those who experienced a separation in the 1967-1971 period and approximate stability for those who experienced a separation during the later interval.

As an additional test, we estimated regressions for each of the 1981 outcomes measures with all nine of the 1976 outcome measures included as independent variables in each equation. Furthermore, in each equation was a dummy variable indicating a marital dissolution prior to the 1976 interview. The coefficients (not shown) for this dummy variable can be interpreted as the effects of a prior marital dissolution on the change in children's well-being between 1976 and 1981. None of these coefficients was statistically significant, however, indicating that the impact of a dissolution was stable over the 5-year period. In short, the longitudinal evidence seems to rule out the hypothesis that the effects of divorce increase with time since separation.

Table 4
Effects of Marital Dissolution on Children's Well-Being by Year of Interview and Year of Separation

Report	1972-1976 ^a		1967-1971 ^a		<i>r</i> ^c
	1976 ^b	1981 ^b	1976 ^b	1981 ^b	
Parent					
Problem behavior	.19	.29**	.36**	.31**	.35
Academic difficulty	-.02	.08	.27**	.32**	.51
Teacher					
Problem behavior	.32**	-.08	.60**	.24**	.39
Academic difficulty	.26*	.01	.20	-.01	.53
Child					
Dissatisfaction	.15	.32**	.29**	.05	.15
Distress	.39**	.30**	.25**	.09	.15
Academic difficulty	.08	.04	.19	-.04	.29

Note. Coefficients in this table are taken from the last three columns of Table 2.

^a Year of separation. ^b Year of interview. ^c Between 1976 and 1981 measures.

* $p < .05$. ** $p < .01$.

There is yet another interpretation to the patterns already observed. The most striking thing about Table 3 is the absence of any effects for those children who were less than 6 years away from the separation at the 1981 interview. This includes all separations that occurred in the years between the two interviews, 1977 and 1981. One could claim that the results presented in Table 3 are quite adequately explained by saying that the process of marital dissolution changed dramatically after 1976, so that children were completely unaffected by divorce and separation during this historical period and possibly thereafter. Although we cannot directly disprove such a claim, we are not inclined to give it much weight. Increases in the incidence of divorce over the period in question were not so dramatic that one would expect drastic differences in the effects of divorce on children. Neither was there any vast change in the cultural climate that might account for such a difference.

Discussion

On the basis of a large, representative sample of children in the United States, we found that those who experienced a marital dissolution were significantly worse off than those who did not, with respect to several measures of problem behavior, academic performance, and psychological distress. These differences were observed in reports from parents, teachers, and the children themselves. Moreover, the differences persisted in the presence of such control variables as age, race, sex, mother's education, and mother's religious preference. Are these differences large or small? The answer obviously depends on the standard of comparison. In this study, the differences by marital status are generally somewhat smaller than boy-girl differences and larger than differences by mother's education (except in the area of academic performance). None of the other independent variables in the regression analyses had a consistently large effect.

On the other hand, the proportion of variation in the outcome measures that could be attributed to marital dissolution was generally quite small, never amounting to more than 3%. Although this could indicate that divorce has only a small impact on the lives of most children, it could also reflect unreliabil-

ity or invalidity in the outcome measures. For many of the measures, our internal consistency estimates of reliability are somewhat below psychometric standards. Moreover, the absence of any direct behavioral observation of the children raises the possibility that these reports may have been biased in unknown ways. Nevertheless, despite the possible flaws in these measures, they did yield statistically reliable differences between the dissolution and nondissolution groups, differences that showed some consistency across parents, teachers, and children.

If it is difficult to characterize the magnitudes of the dissolution differentials by internal comparisons, it is even harder to compare the results of our study with previous studies, primarily because there has been no standard method of quantifying those differentials. Despite this difficulty, it is our impression that the differences that we found are somewhat smaller than those reported in many other studies. If our impressions are accurate, there are several possible explanations as to why we found smaller differences. We have already discussed the limitations of the outcome measures. Another possible reason is that the bulk of our interviews were taken more than 2 years after the separation occurred; in contrast, many other studies have focused on the short-term impact of divorce and have suggested that equilibrium tends to be reestablished after about 2 years.

Although it is tempting to interpret the differences that we found as *effects* of divorce, there are obvious alternative explanations. Families differ in many respects, and those children who were worse off than their peers after a dissolution may have been worse off before the dissolution (Block, Block, & Gjerde, 1986). Because predissolution measures were not available for most of the cases in this sample, we cannot rule out such alternatives. Predissolution measures are available, however, for the 73 children who experienced a dissolution between the two interviews. Hence, it would seem natural to examine the effect of those dissolutions on 1981 outcome measures while controlling for 1976 outcomes as well as other variables describing family well-being. Although we have performed such an analysis, we have not reported it because the data in Table 3 tell the whole story: Even without controlling for predissolution variables, these 73 children were not different from those who were still

in intact families in 1981. This is true whether one looks at postdissolution measures or predissolution measures.

This null result for adolescents is a part of our more general finding that the effects of marital dissolution appear to be more severe among younger children, especially those whose parents separated when the child was in the preschool years. As previously noted, this result could also be explained by an increasing effect of divorce with the length of time since separation or by an historical shift in the impact of divorce. Further analysis of our longitudinal data reduced the plausibility of the first alternative: For measures that were comparable over time, there was no indication that the differentials increased from 1976 to 1981. However, neither did they decline. Thus, it appears that adverse effects for young children tend to be fairly stable, at least in the aggregate, over a substantial period of time. Our data do not allow us to rule out the possibility of a dramatic, historical shift in the effect of divorce after 1976, although this would seem rather implausible.

In contrast to some previous studies, we found that among children who had experienced a dissolution, there was virtually no difference between those whose custodial parent remarried and those whose custodial parent remained single. We also found no evidence for the often-repeated claim that divorce has a more negative impact on boys than on girls. Indeed, for those measures where significant differences appeared, girls were more strongly affected than boys. This finding persisted when we further subdivided the dissolution group into those whose custodial parent remarried and those who did not, although there was some indication that boys whose mother remarried did better than boys whose mother remained single.

Why have prior studies found that boys are more prone to adverse outcomes? Perhaps measures of problem behavior have been used that do indeed pick up sex differences. For example, some studies have found sex differences in the effects of divorce on sex role identification, but there was no such outcome measure in our study. As noted earlier, most investigators have looked at the effects of divorce during the first 2 years after separation, and it is possible that sex differences are confined to the immediate rather than the long-term outcomes. Although we found no evidence for such short-term sex differentials, we may not have had enough cases to detect reliably the age-sex-divorce interaction.

This study has examined how the effects of divorce vary with sex and age of the child and whether the custodial parent remarries. Age and sex seem to make some difference, but remarriage does not. Surely there are other factors that explain why some children who experience marital dissolution are more prone to problems than other children. Although we have been pursuing this question with the NSC data, our results to date have not been encouraging. We found no interactions between marital dissolution and any of the background factors that were controlled in the present study. Thus, the dissolution differentials do not appear to differ by race, mother's religion, mother's education, mother's age at the birth of the child, the child's birth order, or region of residence. Furthermore, other analyses using these same data have found few effects of postdissolution experiences on the well-being of the children. For example, Fur-

stenberg, Morgan, and Allison (1987) reported that, among children whose parents had separated, our measures of well-being were unaffected by the frequency of visitation by the noncustodial father or by the closeness of the relationship with the father. There was some indication, however, that problem behavior was associated with lower levels of child support.

A major virtue of this study relative to most others in this subject area is the large, representative sample. Nevertheless, our experience suggests a need for even larger sample sizes. Although quite adequate for estimating the main effects of divorce, the sample was often too small to get reliable tests and estimates of some of the more complicated interactions that have been frequently suggested in the literature. If we are to pursue the potentially important factors that mediate and specify the effects of marital dissolution on children, then we must be prepared to invest in longitudinal studies with sizable samples that contain reliable measures of family processes.

References

- Alwin, D. (1973). The use of factor analysis in the construction of linear composites in social research. *Sociological Methods and Research*, 2, 191-214.
- Block, J., Block, J. H., & Gjerde, P. F. (1986). The personality of children prior to divorce: A prospective study. *Child Development*, 57, 827-840.
- Chase-Lansdale, P., & Hetherington, E. M. (in press). The impact of divorce on life-span development: Short- and long-term effects. In D. L. Featherman & R. M. Lerner (Eds.), *Life-Span Development and Behavior*, 10.
- Emery, R. E. (1988). *Marriage, divorce and children's adjustment*. Beverly Hills: Sage.
- Furstenberg, F. F., Jr., Morgan, S. P., & Allison, P. D. (1987). Paternal participation and children's well-being after marital dissolution. *American Sociological Review*, 52, 695-701.
- Furstenberg, F. F., Jr., Nord, C. W., Peterson, J. L., & Zill, N. (1983). The life course of children of divorce: Marital disruption and parental conflict. *American Sociological Review*, 48, 656-668.
- Hetherington, E. M., Cox, M., & Cox, R. (1978). The aftermath of divorce. In J. H. Stevens, Jr., & M. Matthews (Eds.), *Mother-child, father-child relations* (pp. 149-176). Washington, DC: National Association for the Education of Young Children.
- Herzog, E., & Sudia, C. E. (1973). Children in fatherless families. In B. M. Caldwell & H. N. Ricciuti (Eds.), *Child development and social policy* (pp. 141-232). Chicago: University of Chicago Press.
- Jöreskog, K. G., & Sörbom, D. (1981). *LISREL user's guide*. Chicago: International Educational Services.
- Levitin, T. E. (1979). Children of divorce. *Journal of Social Issues*, 35, 1-25.
- McCall, R. B., & Stocking, S. H. (1980). *Research about the effects of divorce on families*. Boys Town, NE: The Boys Town Center.
- Price, S. J., & McKenry, P. C. (1988). *Divorce*. Beverly Hills, CA: Sage.
- SAS Institute (1982). *SAS user's guide*. Cary, NC: Author.
- Wallerstein, J. S., & Kelly, J. B. (1980). *Surviving the breakup: How children and parents cope with divorce*. New York: Basic Books.
- Zaslow, M. J. (1987, September). *Sex differences in children's response to parental divorce*. Paper presented at the Symposium on Sex Differences in Children's Responses to Psychosocial Stress, Woods Hole, MA.
- Zaslow, M. J., & Hayes, C. D. (1986). Sex differences in children's response to psychosocial stress: Toward a cross-context analysis. In M. E. Lamb, A. Brown, & B. Rogoff (Eds.), *Advances in developmental psychology* (Vol. 4, pp. 285-337). Hillsdale, NJ: Erlbaum.

Appendix

1976 Scales

Parent's Report

Hyperactivity (a = .61)

1. In general is (child) rather high strung, tense, and nervous; moderately tense; moderately relaxed; or unusually calm or relaxed?
 For each of the following statements, please tell me . . . how much like that (child) is:
2. Can't concentrate, can't pay attention for long
 3. Easily confused, seems to be in a fog
 4. Is awfully restless, fidgets all the time, can't sit still
 5. Acts too young for (his or her) age, cries a lot or has tantrums

Problem Behavior (a = .59)

1. With respect to (his or her) temper, would you say that (he or she) has a strong temper, losing it easily; occasionally shows a fairly strong temper; gets angry once in a while but does not have a particularly strong temper; or hardly ever gets angry or shows any temper?
 2. Has (child) ever stolen anything, regardless of its value?
 For each of the following statements, please tell me . . . how much like that (child) is:
 3. Fights too much; teases, picks on, or bullies other children?
 4. Breaks things; deliberately destroys (his or her) own or others' belongings?
 5. Often tells lies, is deceitful?

Teacher's Report

Problem Behavior (a = .76)

1. How often, if ever, is any specific disciplinary action required for this child?
 For each of the following statements, indicate how much like that the child is:
 2. Fights too much; teases, picks on, or bullies other children?
 3. Cheats; tells lies; is deceitful?

4. Has a very strong temper; loses it easily?

Adjustment (a = .83)

1. Compared with other children (his or her) age, describe the child's overall adjustment to the school and classroom situation.
2. Is the child usually in a happy mood, very cheerful?
 Compared with other children of the same age, how well does this child:
3. Get along with teachers?
4. Get along with other children?
5. Play and work by (himself or herself)?

Child's Report

Dissatisfaction (a = .52)

How do you feel about:

1. Yourself?
2. The friends you have?
3. Your family?
4. Being a (boy or girl)?
5. Being an American?

Distress (a = .42)

1. Thinking about all the things we've talked about, how are things going in your life?
 For the following statements, tell me whether this is the way you feel?
2. I am lucky.
3. I often wish I were someone else.
4. I'm easy to like.
5. I can do many things well.
6. I like being the way I am.

1981 Scales

Parent's Report

Delinquency (a = .60)

1. Since January 1977, about the time of the first interview, has (he or she) had any behavior or discipline problems at school resulting in your receiving a note or being asked to come in and talk with the teacher or principal?
 2. Has (child) been suspended, excluded, or expelled from school since January 1977?
 3. Since January 1977, has (he or she) run away from home?
 4. Since January 1977, has (child) stolen anything, regardless of its value?
 5. How many times, if any, has (child) been stopped or questioned by the police or juvenile officers?

2. Is disobedient at home.
3. Is disobedient at school.
4. Hangs around with kids who get into trouble.

Distress (a = .69)

Tell me whether each (of the following) statement(s) has been . . . true of (child) during the past 3 months:

1. Has sudden changes in mood or feelings.
2. Feels or complains that no one loves (him or her).
3. Is too fearful or anxious.
4. Feels worthless or inferior.
5. Is unhappy, sad, or distressed.

Teacher's Report

Problem Behavior (a = .79)

1. In your class, how often was any disciplinary action required for this student?

Problem Behavior (a = .69)

Tell me whether each (of the following) statement(s) has been . . . true of (child) during the past 3 months:

1. Cheats or tells lies.

For each of the following statements, please indicate . . . how much like that this student was in 1980-1981:

2. Fought too much, teased, picked on, or bullied other students.
3. Cheated, told lies, was deceitful.
4. Had a very strong temper, lost it easily.

Academic Difficulty ($\alpha = .95$)

How did this student compare with others in his or her class last year (1980-1981)?

1. Verbal ability?
2. Math ability?
3. Overall performance?

Child's Report

Delinquency ($\alpha = .52$)

1. How many times, if ever, have you been stopped by or questioned by the police or juvenile officers about something they thought you did wrong?

In the last year, about how many times have you:

2. Hurt someone badly enough to need bandages or a doctor?

3. Lied to your parent(s) about something important?
4. Taken something from a store without paying for it?
5. Damaged school property on purpose?

Dissatisfaction ($\alpha = .71$)

Are you satisfied, somewhat satisfied, or not too satisfied with:

1. Your friends?
2. Your family?
3. Yourself?
4. Being a (boy or girl)?
5. Being an American?

Distress ($\alpha = .46$)

1. Do you feel lonely and wish you had more friends?
2. Do you have days when you are nervous, tense, or on edge?
3. Do you have days when you are unhappy, sad, or depressed?
4. All things considered, how is your life going?

Received June 12, 1987

Revision received December 2, 1988

Accepted December 13, 1988 ■